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TOXIC MATERIALS HANDLING AT INDUSTRIAL FACILITIES IN THE ROCHESTER, NY AREA

HEARING

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

MARCH 21, 1989—ROCHESTER, NY

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TOXIC MATERIALS HANDLING AT INDUSTRIAL FACILITIES IN THE ROCHESTER, NY AREA

TUESDAY, MARCH 21, 1989

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON ENVIRONMENTAL PROTECTION,
Rochester, NY.

The subcommittee met, pursuant to notice, at 9:33 a.m., in courtroom 1, Kenneth Keating Federal Building, Rochester, NY, Hon. Daniel P. Moynihan presiding.

Present: Senator Moynihan.

Senator MOYNIHAN. A very pleasant good morning to our witnesses and our guests and the officers of the court. We'd like to thank the court for its great courtesy in making this room available for the hearing, which is in the nature of an informational hearing on the subject of toxic materials handling in industrial facilities in the Rochester, New York, area.

We are here as the Subcommittee on Environmental Protection of the Committee on Environment and Public Works of the United States Senate.

Our first panel was to have been the Honorable Thomas Jorling, who is the Commissioner of the New York State Department of Environmental Conservation, and Doctor James Melius, who is the Director of Occupational Health and Environmental Epidemiology with the New York State Department of Health, to call attention to a new term and a new field in public health.

They are somewhere at an airport because of the weather. I hope they will be here before the morning is out, and, if not, we'll get their testimony and make it part of the record.

Anyway, thanks to the energetic nature of the county government in Monroe, the second panel is here and we'll start with them. I'm very happy to welcome Mr. Paul Wendelgass, who is the Environmental Systems Analyst for the county; Doctor Karen Bell, who is the Deputy Director of Health; Doctor Joel Nitzkin, the Monroe County Director of Health; and Mr. Hark Merkins. What is your title Mr. Merkins?

Dr. MERKINS. Deputy Director.

Senator MOYNIHAN. Thank you.

Let us go forward. I'd like to see if we can arrange the presentations to be fairly brief. We obviously have only a half hour per panel. I will have questions, and perhaps you will all exchange information.

We are here to learn what you think is going on and what our committee needs to know. We will commence. I believe, Mr. Wendelgass, you would like to be the opening presentation for the county.

Mr. WENDELGASS. Yes. Thank you, Senator.

STATEMENT OF PAUL WENDELGASS, ENVIRONMENTAL SYSTEMS ANALYST, MONROE COUNTY

Mr. WENDELGASS. I am Paul Wendelgass. I am on County Executive Tom Frey's staff as an environmental systems analyst. I'm joined by Doctor Nitzkin and Deputy Health Directors Doctor Karen Bell and Doctor Mark Merkins.

Senator MOYNIHAN. Could I just interrupt to say how much we appreciated Mr. Frey's cooperation with us. He couldn't have been more forthcoming or more interested or more helpful.

Mr. WENDELGASS. He sends his regrets that he had to be in Albany today.

I will speak briefly this morning on the county's role over the past year in the structure overseeing the Kodak Park environmental investigations; Doctor Nitzkin will speak about the recent studies at City School 41; Doctor Bell will describe the health assessment studies under development by county and State health departments; and Doctor Merkens will speak briefly about the events surrounding the 1985 Xerox incident.

The news about groundwater contamination around Kodak Park first became public about one year ago. Over the next several weeks, State and County Health departments, the State Department of Environmental Conservation, municipal officials, and citizens worked together to evolve the structure which now supervises the investigation.

The Kodak Park Technical Review Team—or "The Technical Team"—is the structure that is made up of representatives of DEC, the State Health Department, County Health Department, the City of Rochester, the Town of Greece, citizen groups, including representatives of the neighborhood surrounding Kodak Park, and the technical consultant for the citizens' groups. The technical consultant is paid for with funds provided by Kodak and is directed by the citizens' groups. The team operates under DEC's authority under the federal RCRA statute.

The Technical Team meets regularly to plan and review progress in the various investigations. Kodak and its consultants are responsible for the development of work plans for the investigations. DEC has lead responsibility for technical review of the environmental investigations, most recently those include the ground vapor studies and ground water investigations.

State and county health agencies provide technical review on these studies. Separately, the health agencies have lead responsibility for the health assessment studies which Doctor Bell and Doctor Melius from State Health will describe further.

Within the past week, these three technical agencies worked together to present the initial results of the ground vapor studies to Rand Street residents.

The County Health Department has also shared with DEC responsibility for on-site monitoring of testing at and around Kodak Park. County staff are also responsible for inspection of residences taken over by Kodak under its value protection plan.

Senator MOYNIHAN. Mr. Wendelgass, just so we can get the most use out of your time and the committee's, I think we know about your organizational structure. We're interested in what you have learned, and we're also interested in what you might want to tell us about RCRA.

We reauthorize RCRA this year, don't we?

Mr. KEINITZ. Yes.

Senator MOYNIHAN. This is Mr. Roy Keinitz, who I would like to introduce for the record. He is a member of the staff of the Committee on Environment and Public Works.

The statute expires this year, and so we have to re-enact the measure and improve it, if we can. So we'd like to hear about things like that.

Mr. WENDELGASS. Just very quickly then, Senator, I think the Technical Team has found this process to be a useful one. I think that many of the members share frustrations about the time frame over which the process has evolved. We'd all like to see results faster, but I believe that the process we have put together is one, with all its conflicts, that provides a useful model, and a process in which I think we all have some confidence—the involved agencies, as well as the residents of the county.

Mr. WENDELGASS. I think what would be best, then, is to allow Doctor Nitzkin to speak on the issues surrounding School 41.

Senator MOYNIHAN. Good.

Dr. Nitzkin?

STATEMENT OF JOEL NITZKIN, DIRECTOR OF HEALTH, MONROE COUNTY

Dr. NITZKIN. Thank you, Senator. I'm Doctor Joel Nitzkin, Director of the Monroe County Health Department, Rochester, New York.

A few weeks ago it was my responsibility to interpret the laboratory and other data relative to the safety of School 41. It was in that context that I, after consultation with many others, generated the recommendation that there was no health-related reason to close the school.

Because of its proximity to Kodak Park, a series of indoor air studies had been done late in August prior to the start of school. These were done along with outdoor air studies and sampling from a control school about three miles away. These studies showed levels of methylene chloride within the school to be well below State Air Guide I recommendations, and a virtual absence of other chemicals of concern.

Interest in School 41 was reawakened when Kodak reported a spill of up to 60,000 gallons of methylene chloride onto a railroad bed about 100 yards east of the school and 17 feet below it late in December. The tracks are laid in what amounts to a big trench about 17 feet below ground level.

Drilling of test wells on school property began Monday, February 13, while students and staff were off for their one-week February break. Tuesday afternoon, the drilling crew detected organic vapors about 17 feet below ground in a well about 50 feet northwest of the school along the railroad right-of-way.

Response was immediate.

During the next few days an extensive series of soil and air studies were done to determine whether or not chemical vapors might be entering the school from beneath the ground, and, if so, whether or not such vapors present a health hazard to the students, staff, or visitors within the school.

The data, as reported out that Sunday afternoon, showed the following: number one, the major chemical contaminant underground on school premises was acetone, not methylene chloride. This, in turn, suggested that the December spill had little or nothing to do with the contamination found under the school.

Two, the major contaminant in the school as was methylene chloride in concentrations reflecting outside air, suggesting that ambient air, not soil vapors, was the major contributor to air contamination within the school.

Three, the heaviest concentration of methylene chloride measured in the school was 49 parts per billion—about triple the Air Guide I recommendation of 17 parts per billion.

Since the sample was only two hours in duration—

Senator MOYNIHAN. Doctor, I guess we'll want to know what Air Guide I is.

Dr. NITZKIN. Air Guide I is the recommendation made by the State Department of Health in New York to the State Department of Environmental Conservation. It represents the best opinion of the State Health Department in terms of a level of chemical exposure that would be basically safe—24 hours a day, 7 days a week, for a 70-year lifetime—to the most susceptible members of our community—infants, pregnant women, and so on. It is basically 30,000 times more stringent than the OSHA guideline.

Since the sample was only two hours in duration and taken at a time when the wind was blowing from the northeast—that is, right from Building 53 at Kodak Park, which is the source of most of the methylene chloride—I considered this to be compatible with the long-term average exposure of 17 parts per billion or less, and, therefore, safe for occupancy.

The full set of circumstances surrounding both the school and these laboratory studies were considered when making this recommendation. In my judgment, after consulting with key staff of the two State agencies, the data were strong enough to justify reopening of the school, despite limitations of the sampling procedure that were later becried as flaws and contamination in the week that followed.

In other words, I felt that we had enough unflawed and uncontaminated data to confidently recommend that the school be reopened while we proceeded to do the definitive studies to document average long-term concentrations of methylene chloride in the school.

The start of school was delayed for one day until Tuesday, February 21, to give the superintendent and school board a chance to

digest the data and the local health department recommendation and to hold an informational meeting to inform the community.

Due to the preliminary nature of the initial studies, we committed ourselves to doing a definitive set of indoor air studies as quickly as possible after school began. Thanks to the generous cooperating and resources of the New York State Department of Health, this work began Friday, February 24, and continued through this last week.

Results from the first three days of testing were reported out Thursday, March 9th. They showed average day-long concentrations of methylene chloride, both in and outside the school, to be about nine parts per billion, well within the Air Guide I recommendation.

Senator MOYNIHAN. Which is 17?

Dr. NITZKIN. Which is 17.

Senator MOYNIHAN. And I take it that this is an average over time? There would be spikes in the curve?

Dr. NITZKIN. Yes.

Senator MOYNIHAN. But then they average out?

Dr. NITZKIN. Right. These are eight-hour samples, and I guess there were about 20 or 30 of them reported out on March 9th.

Results of the full set of follow-up studies should be available in another week to ten days. Along with the testimony, I'm also providing copies of the press release announcing the March 9 studies and the complete set of handouts from the citizens meeting several weeks before.

Senator MOYNIHAN. That will be made part of our record.

Dr. NITZKIN. I'd be happy to answer any questions.

Senator MOYNIHAN. How did the Kodak operation spill 60,000 gallons of methylene chloride onto that railroad bed? What happened?

Dr. NITZKIN. Kodak, in the railroad bed, has a large number of transmission lines—these are four-inch pipes that take solvent from one part of the park to another, and there was a leak in one of those pipes.

Senator MOYNIHAN. Just a leak in a pipe. All right.

[The press release referred to by Dr. Nitzkin follows, the attachments have been retained in committee files:]

PRESS RELEASE

March 9, 1988, 1:00 p.m.
Monroe County Health Department
111 Westfall Road
Room 964

FINAL RESULTS OF PHASE I FOLLOW-UP AIR TESTING, SCHOOL #41

Today, Dr. Joel L. Nitzkin, Monroe County Health Director, announced the results of the Phase I follow-up air testing done in and outside of School #41, the weekend of February 24, 25 and 26. Also present for the announcement were Ben Douglas, President of the Rochester City School Board; Carol Carson, Principal of School #41; and a representative of the School PTA.

Thirty-two sets of samples were gathered and analyzed by the New York State Department of Health, according to a protocol announced two weeks ago.

The average concentration of Methylene Chloride, both in and outside the school, was 9 parts per billion (ppb). These preliminary findings support the impression that air within the school does not present a health hazard.

The level of Methylene Chloride within the school reflected the concentration of Methylene Chloride in the air outside the school.

Results were also reported for two other chemical substances. No Cyclohexane was detected in any of the samples tested. Minimal amounts of Acetone were detected in one outdoor sample, and one from a third floor classroom. The lack of Acetone in samples from the crawl space tested, and from any of the ground floor rooms again suggests that little or no contaminated soil vapor is entering the school.

A more detailed summary of the data is as follows:

METHYLENE CHLORIDE, IN PARTS PER BILLION, SCHOOL #41

Date	Indoor Average	Indoor Range	Outdoor	Wind Direction
2/24	7	5 - 7	10	NNW WNW
2/25	4	N.D.- 5	3	SSW
2/26	16	12 - 21	14	NE
Three Day Ave:	9		9	

The two positive samples for Acetone were 42 ppb outside the school, and 67 ppb in Room 322, both on Sunday, February 26.

The levels of detection were 3 ppb for Methylene Chloride, 21 ppb for Acetone and 14 ppb for Cyclohexane.

All results were originally reported in micrograms per cubic meter, then converted to parts per billion, for purposes of this press release. This was done by dividing the original lab results by 2.4 for Acetone, and 3.5 for Cyclohexane and Methylene Chloride.

The seven blanks run with these 32 samples were reported as "very clean, with very little background," so "contamination" does not appear to be a problem with these results. Seven more blanks taken at the same time will be run in the next few days, but the lab did not feel that these results need be held up pending this additional report.

Since only single samples of each chemical was tested in each room, each day, results are best summarized as averages, as presented above. The February 24 samples were 5 hours in duration. The samples from the 25th and 26th were eight hours in duration.

Dr. Nitzkin emphasized the very preliminary nature of these data, and that a fuller report will be coming out after analysis of data from the Phase II study now underway. Phase II consists of 21 days of sampling in School #41, with School #44 as a control.

Senator MOYNIHAN. Doctor Bell?

STATEMENT OF KAREN BELL, DEPUTY DIRECTOR OF HEALTH, MONROE COUNTY

Dr. BELL. Good morning, Senator.

I'm Doctor Karen Bell, Deputy Health Director for the county, and responsible for the disease control activities.

I very much appreciate the opportunity to share with you the processes and plans that we have for the Health Assessment Studies Committee, which was formed in response to concerns about possible contamination from Kodak Park.

This committee consists of a number of groups, all with different roles. I'd like to just outline them for you.

The first is the New York State Health Department, which will be providing us with a model by which the population with the greatest exposure to Kodak air emissions can be defined, study designs for all the surveys and studies to be undertaken, personnel to conduct the studies, data analysis, and expertise and support in the development of other studies that may be deemed necessary.

Secondly, we have a number of citizens from the various neighborhood committees involved who have several tasks: one, they will function as liaisons between the health assessment process and the community at large, and, as such, citizens on the Central Committee will help to communicate the rationales of the health assessment studies, what they hope to achieve, their limitations, and interpretations of the results.

Secondly, it will be hoped that they will provide encouragement and support for the study process in the community to ensure maximum participation. They will be asked to review study designs and analyses to——

Senator MOYNIHAN. Doctor Bell, I guess we're fairly familiar with the organization of this kind of epidemiological study.

Dr. BELL. Fine.

Senator MOYNIHAN. Why don't you go to your question of the three classic categorical approaches that you're going to have to deal with—case control studies, symptom prevalence studies, and cohort studies—and tell us and the audience what those things mean and what you plan to do.

Dr. BELL. Thank you.

As you may know, there are basically three classical approaches to dealing with the epidemiology of environmental health. Those three types of studies are: case control, symptom prevalence, and cohort studies.

At the present time, the health assessment committee has planned, or is planning, efforts in all areas. I'd like to perhaps just view those with you.

Senator MOYNIHAN. Good.

Dr. BELL. From the case control point of view—and perhaps I could just define that type of study for a moment. This type of study compares cases of a specific disease or outcome to a group of controls without the disease or outcome with respect to exposure to a particular risk factor.

In this situation, if living near Kodak Park is considered to be a risk factor, we are examining if that, in fact, is true for a number

of outcomes. These include: low birth weight, cancer of the brain, cancer of the pancreas, and cancer of the liver.

The second type of study that——

Senator MOYNIHAN. Now, you will compare one area with a control group from another area? Is that the point?

Dr. BELL. One takes cases of—let's take the low birth weight study, for instance. One examines all of the babies born in the county over specific time periods——

Senator MOYNIHAN. In the county? That's your control?

Dr. BELL. Right. For low birth weight. And then, through data analysis, determine if there is a greater risk of being a low birth weight if born near Kodak Park than otherwise. That's the case control study.

Senator MOYNIHAN. I am trying to get to the point of what your control group is. Your control group is Monroe County?

Dr. BELL. Yes. The rest of the babies born in the county.

The second type of study done is the symptom prevalence study, and these are designed to determine if specific symptoms or outcomes appear more frequently in a cross section of a population that has been defined to be exposed to a certain risk factor. Such a study is now being developed and will be conducted in the population with the greatest documented exposure to air emissions from Kodak Park.

At the present time we are defining the control group for this particular index group. We have not yet reached the point of definition for that control group.

Senator MOYNIHAN. A little more English please?

Dr. BELL. I apologize.

Senator MOYNIHAN. You're not going to use Monroe County?

Dr. BELL. They will be citizens in Monroe County. We don't know which ones yet.

Senator MOYNIHAN. What about non citizens?

Dr. BELL. The concept is——

Senator MOYNIHAN. Human beings?

Dr. BELL. Yes. The concept is to have a control group of people who are very, very similar in socio-economic background, race, age, sex distribution, and a number of other parameters, to the people who live near Kodak Park.

Once we are able to define a population with those similar characteristics who are not exposed to the same level of contaminants in the air emissions that the——

Senator MOYNIHAN. How do you distinguish case control from symptom prevalence? How is that distinguished from——

Dr. BELL. In the case control studies, we are looking at a defined outcome. We are looking for——

Senator MOYNIHAN. You've got it?

Dr. BELL. Right. We have it. We're looking at all babies with low birth weight. We are looking at all cases of cancer.

Senator MOYNIHAN. And how would this—what would a symptom be, as against an outcome?

Dr. BELL. In a symptom prevalence study we are simply questioning people in a questionnaire directly in the neighborhoods involved for a list of various symptoms or other situations that they may have. The big difference between the two is that, in the case

control study, in this situation, we have all the data we need in registry form. We go to birth certificates, we go to cancer registries, we don't interact with the community.

Senator MOYNIHAN. Give me an example of a symptom, so that the committee can understand what you're talking about.

Dr. BELL. Basically symptoms run the whole gamut. We will be asking about what we call "acute symptoms"—how frequently people have nose bleeds, irritation of the eyes or skin.

Senator MOYNIHAN. And you distinguish that from a diagnosed disease condition?

Dr. BELL. That's right.

Senator MOYNIHAN. And your third category?

Dr. BELL. The third category is what is called "cohort studies." In this situation, one must start with a very specific, well-defined population with a known particular exposure. One also must have a comparison group without that particular exposure. These two groups of people are then followed long-term with respect to whatever outcomes may be defined as perhaps related to the exposure.

These types of studies do take quite a bit of time. They go for 10, 12, or 20 years, and they are very expensive to do. And, as I mentioned earlier, they do require a definite, known exposure.

At the present time, we are still awaiting results of the environmental studies, which will give us indications of whether such a group exists with a definitive, well-known exposure. If we find that group, then we will be developing this type of a cohort study.

Senator MOYNIHAN. Go back over that, would you? You're awaiting the results of what study?

Dr. BELL. The environmental study.

Senator MOYNIHAN. You're trying to find 200 people who have lived in a particular place for 15 years?

Dr. BELL. The environmental studies are the ones that Mr. Wendelgass had alluded to a little bit earlier. These are the ones that are being done under the RCRA process—the studies of soil gas, the studies of ground water, and the studies in the homes, themselves.

If the environmental testing demonstrates a specific group of people—and a good example may be people who are living in homes that have been demonstrated to have been impacted by groundwater contamination—they would be a very well- defined group of people that we may be able to follow.

Senator MOYNIHAN. So that remains to be seen whether you have the specific exposures that would warrant a cohort study?

Dr. BELL. That's correct, Senator.

Senator MOYNIHAN. And you haven't started any of these?

Dr. BELL. We have started some of the case control studies. The low birth-weight study has been in progress for several months. The studies on cancer are just beginning now. And the background work for the symptom prevalence study is well under way. The study, itself, will not be done—

Senator MOYNIHAN. You can do a low birth weight analysis pretty quickly, can't you?

Dr. BELL. Actually, no. One needs to get all the information from the State over a 10-year period and do some fairly sophisticated data analysis on it.

Senator MOYNIHAN. From the State? I thought it was the county.

Dr. BELL. Yes. But in this particular State, all of our information is kept at the State level on computer tapes. We don't have that available at the county here.

Senator MOYNIHAN. I'm not pressing you, but I'd like to say it seems to me that is something that is easily quantified and accessible—something you could do in a week.

Dr. BELL. Well, actually I wish it were, Senator. One of the problems has been that the data is on tapes, but it must be transferred to another type of tape before analysis can be done. Various types of analysis need to be run. It should be finished this spring.

Senator MOYNIHAN. It should be finished this spring?

Dr. BELL. Yes.

Senator MOYNIHAN. Well, it is spring.

Dr. BELL. Show me a daffodil, and I'll give you results.

Senator MOYNIHAN. There will be lilacs one of these days soon. So we'll know something in June?

Dr. BELL. Yes.

Senator MOYNIHAN. Good. That's fine.

Doctor Merkins?

STATEMENT OF MARK MERKINS, DEPUTY DIRECTOR OF HEALTH, MONROE COUNTY

Dr. MERKINS. Senator, I'd like to take the opportunity to clarify an already-completed study, which I think answers a series of questions and really would satisfy and bring comfort to the citizens, hopefully, in an area around Xerox properties in one of the towns in our county, in Webster.

Senator MOYNIHAN. In Webster?

Dr. MERKINS. That's correct.

We were first informed about the possibility of contamination of groundwater off of Xerox property in August of 1985. In the process of constructing a new building the preceding year, Xerox had taken soil samples at the site of construction and later discovered that the samples contained an organic solvent, toluene, and a cleaning agent, trichloroethylene—TCE is certainly much easier.

This was reported, because of its relative apparent small quantity of spill, to the proper agencies—so we are told by Xerox—and Xerox went ahead and placed monitoring wells in circumference around the site of the discovered contamination.

In retrospect, apparently a pair of old storage tanks leaked over time. They were discovered and removed in the process of construction.

The public was notified at the same time as State and county agencies, at the time in which monitoring wells on the edge of Xerox' property on Salt Road revealed the presence of the TCE.

Xerox appropriately recognized that——

Senator MOYNIHAN. That's trichloroethylene?

Dr. MERKINS. Yes, trichloroethylene.

Xerox appropriately recognized that citizens across the street were using wells as the source of drinking water for human consumption. They immediately delivered bottled water and suggested

that people not use those wells until investigations were completed, and then activated the process by informing us and other agencies.

Within the first day of being so informed, we also were referred a family with some symptoms. They were told to seek a medical evaluation. This occurred even before environmental investigation was commenced.

Needless to say, a comprehensive investigation was carried out involving, as we have already described, many agencies.

Senator MOYNIHAN. Why do you say "needless to say"? Is that because this is Monroe County, where comprehensive investigations are always carried out, needless to say?

Dr. MERKINS. That's our job. Absolutely.

Senator MOYNIHAN. Good. I believe you.

Dr. MERKINS. That investigation was based upon the obtaining of well water samples in wells used for human consumption and in existing wells, even though not used.

This is a geographic area which is semi-rural, and there is a public water supply available; however, some of the home owners chose to use well water, perhaps for cost-saving purposes and perhaps for a sense of living in a semi-rural type of lifestyle.

Records of air emissions of previous industrial accidents and of other landfill sites on Xerox property were reviewed to rule out interplay from other events. Air emissions, it must be noted, have been consistently below required maximum levels.

Because the original TCE plume spread in an unexpected fashion—that is, moving to the east instead of with the groundwater flow off to the northwest—sampling for substances from other landfills on Xerox' property was carried out also. Arsenic was found in well water samples.

Months of sampling was carried out, testing a total of 197 wells over many square miles of the town.

Possible mechanisms were researched, revealing that arsenic was present from natural geologic formations, and possibly from former—prior to the 1950s—pesticide usage.

The well water samples revealed the presence of TCE and related chemical substances in the wells used by only one home—676 Salt Road—and that was the family, in fact, which originally contacted poison control and was referred on to us, and we referred them on for further medical evaluation.

Under DEC supervision and the RCRA process, the full extent of the TCE plume was demarcated. Removal has begun, and legal proceedings have been brought against Xerox Corporation.

A case of cancer has occurred in a resident in an adjacent home after this environmental and legal process was completed. The family has received legal redress. The plume does not expose any other homes.

It is helpful to realize that a review of the tumor registry reveals no other unexplained or potentially related cases of cancer that have occurred in residents of Salt Road in that block in the preceding decade.

This all comes to light at this time, Senator, because of a recent article in the "Washington Post" which raised concern about the sealing of proceedings of out-of-court settlements. The article did not suggest insufficient investigation; it merely used the example

of this unfortunate event to highlight the legal quirk with out-of-court settlements.

Senator MOYNIHAN. Which unfortunate event?

Dr. MERKINS. The events of the spill and the entire situation I have described to you certainly must be called unfortunate.

The Health Department will be consulting with our county attorney whether there is any recourse to review the proceedings of the out-of-court settlements. I have, however, not received any evidence suggesting that there is any potential public health benefit to be gained. However, because of public concern we will make all efforts to have access to those proceedings and perhaps be able to share that information.

Senator MOYNIHAN. Doctor Merkins, the sealed records involved how much medical information?

Dr. MERKINS. I can only make conjecture because it is sealed. I understand——

Senator MOYNIHAN. I guess with respect to how many?

Dr. MERKINS. Two households.

Senator MOYNIHAN. Two households?

Dr. MERKINS. Correct.

Senator MOYNIHAN. So it wouldn't have any epidemiological value to you?

Dr. MERKINS. The characteristic of this particular contamination, this particular spill—it was a very narrow plume under one or more houses, not three, and it has been well outlined behind. So we're not investigating symptoms; we are rather faced with a known contamination. We were required to identify the extent of that and then refer those individuals off for medical evaluation, and they also later sought legal redress.

Senator MOYNIHAN. You've asked the Department of Health Counsel about the question of sealing court records?

Dr. MERKINS. That's correct.

Senator MOYNIHAN. And has the counsel responded?

Dr. MERKINS. The original response has been that there is no legal precedent to be able to obtain those records.

Senator MOYNIHAN. In all the history of jurisprudence, there is no——

Dr. MERKINS. That's what my county attorney tells me.

Senator MOYNIHAN. And does he think he ought to make history and establish that?

Dr. MERKINS. We'll certainly be reviewing that, and that's why I bring it up in that light, Senator.

Senator MOYNIHAN. Well, the "Washington Post" article was very serious. It was not addressing a subject that was confined to the town of Webster in Monroe County. It is a national——

Dr. MERKINS. The issue is terribly important, and, from my viewpoint, the legal process broke off communication with the one family with symptoms and did not set up an environment bringing the other family to our attention in a timely fashion.

In the article, I'm noted as saying "not knowing either the outcome of the cases or even, in fact, the medical symptoms in the persons who did seek legal redress," and that is correct. Up until the article I did not know.

Senator MOYNIHAN. But you think you now will? Well, you know who is involved, so you can ask them.

Dr. MERKINS. In fact, they are not able to speak with us because of the legal restrictions.

Senator MOYNIHAN. That doesn't make a lot of sense.

Dr. MERKINS. I can't argue with the legal aspect. From the public health viewpoint, Senator, let me suggest that we know the extent of the contamination. We know the persons who were exposed——

Senator MOYNIHAN. And you can't——

Dr. MERKINS. They have received legal redress. No other citizens are at risk.

Senator MOYNIHAN. But the public has the need to know what evidently happened, does it not? What is your professional judgment there?

Dr. MERKINS. I've suggested that. We certainly are looking at the opportunity to get those records released, if possible.

Senator MOYNIHAN. You're sounding like a lawyer wrote that sentence for you.

You'd like to see those records.

Dr. MERKINS. I personally and professionally would like to see those records. Yes, of course.

Senator MOYNIHAN. This is not for this committee to decide, but I would hope you would press it, and I hope you would let us know, because we make laws in Congress, and if there is a statutory resort, that may be the way we turn. There is something unseemly about public health information and environmental health information not being available in any circumstance.

Dr. MERKINS. Senator, I thoroughly agree. There are certainly other cases nationally in which the investigation was not completed and such a sealing of records would prevent a comprehensive study.

Senator MOYNIHAN. I think that's what the Washington Post was dealing with.

Dr. MERKINS. Absolutely, and I'm in agreement.

Senator MOYNIHAN. It is a national question. I think that's a fair-minded response.

Let's stay with this, and it may be that if there is a statute required—as I say, the RCRA legislation is going to be renewed this year, and this gives us an opportunity to look at things and see if there is something that has come along that requires a response. I see you are agreeing?

Dr. MERKINS. Absolutely.

Senator MOYNIHAN. I appreciate that.

Senator MOYNIHAN. Well, Mr. Wendelgass, would you or anybody like to add to these comments? Doctor Bell?

Mr. WENDELGASS. Senator, if I may: on the Xerox question, we will be pursuing that with our county attorney and doing our best to get the information that Doctor Merkins described.

Senator MOYNIHAN. Will you let us know what happens?

Mr. WENDELGASS. Yes.

Senator MOYNIHAN. We would like to know, and I think we have a reasonable need to know.

Dr. Nitzkin?

Dr. NITZKIN. Yes, Senator. One of the problems that has plagued us as public health officials trying to address the health-related concerns is the fact that there seems to be no differentiation under the RCRA process between environmental contamination that might be of health concern and environmental contamination that might not.

Now, environmental substances and chemical contaminants shouldn't be where they shouldn't be, and that is a matter of ethical principle that I think we ought to pursue. But there is something about the process that seems to have planted in people's minds the notion that any chemical contamination of any level, whatever, represents an unacceptable health risk and, therefore, mandates that action be taken to close schools, evacuate neighborhoods, and so on.

There are other elements of the process, the way it seems to play out, that make it very difficult for us to proceed very rapidly to address the health-related questions.

We have, in the situation of Rand Street, a perfect example. This is a situation where the concern came to us a year ago. We are still not at the point in time where we have done the studies that will really address levels of exposure within individual homes because of the slowness of the process. It has not made it readily possible for us to say, it's only a health concern at these levels, and, therefore, we don't need state-of-the-art technology in the lowest possible levels of detection. We can go with levels of detection that we could easily reach with a lot of available laboratory documentation, proceed quickly with the health studies, and then perhaps proceed at a more leisurely pace to identify what has to be cleaned up within the environment.

This has created a situation in the neighborhood that has left an impression that it may be years before they get any meaningful answers. And, in fact, it has already been a year and it will be at least a year more for at least some of those answers, and I think that is an unfortunate part of the process.

Senator MOYNIHAN. Can I say that there is nothing that has been more discouraging to our committee than the possibility of really good information opportunities on this subject being missed—some have been botched, or worse—and the public has a right to and the need to know, and somewhere between the rigor of professional standards and the anxiety of people there is a barrier of communication.

Epidemiologists need to develop a bedside manner—put that down—and explain to people what they know and what they don't know, and how long it might take. It gets awfully "jargonny" and means, squares, and regressions, and this and that, and the next thing you know, people think you're trying to conceal your meanings, as against communicating.

Dr. NITZKIN. Well I think that we probably could have gotten a lot of the health-related data a lot quicker had we been able to proceed with studies that were easier to accomplish because it didn't require the kinds of detection limits that we're using to identify every last trace of the chemical substance, no matter how small. I would have preferred proceeding with the process in which we made it clear that it is only above certain kinds of levels or expo-

sures that there is any real health concern, and then get those questions answered quickly and then proceed with the more detailed studies to identify——

Senator MOYNIHAN. We live in a sea of chemicals, that's all it is out there is chemicals. And somewhere between complacency and an effort to frighten people needlessly there has to be some median.

I know for certain that our committee is very interested in pressing for a science-based environmental mode so, as much as we can, we know what we're talking about and know what we're trying to bring about. We would like to stay in touch with the county health department, and we would like to think that you will tell us what you are learning, not just about the specifics here, but about the process you go through and to what degree there is some that can be improved and to what degree we help or hinder and what you think we ought to know.

Do we agree on that?

Dr. NITZKIN. I think so.

Senator MOYNIHAN. Yes. This has not ended. I hear nothing but able and professional and committed persons doing their job, and sometimes that job is, of necessity, extended.

Those computer tapes can be moved faster than you might think. If there was money to be made you'd be surprised how quickly those tapes would move.

But, in any event, thank you very much for this testimony. Let us understand that we would have some relationship now. You can help us as we legislate this year, and we hope that you will.

Thank you all very much.

Dr. Melius, are you here?

Dr. MELIUS. Yes, sir.

Senator MOYNIHAN. Good morning. Have you been here all along?

Dr. MELIUS. Yes. I came in last night. I decided not to take a chance on the weather.

Senator MOYNIHAN. I didn't know that. Forgives us.

We will stand in recess.

[Recess.]

Senator MOYNIHAN. The committee will resume its proceedings.

Dr. Melius is the Director of Occupational Health and Environmental Epidemiology of New York State. He has written testimony.

I'm sorry, sir. Somehow I got the word that you were on the plane with Commissioner Jorling. But, here you are.

Dr. MELIUS. Right. We were hoping Commissioner Jorling would arrive shortly and we could go on together, so I think that was—

Senator MOYNIHAN. Would you prefer it that way?

Dr. MELIUS. I don't know what his schedule is. I haven't heard.

Senator MOYNIHAN. Does anybody here know?

[Unidentified speaker]. The Commissioner has just arrived.

Senator MOYNIHAN. He has just arrived. Bravo.

Everybody get out of the way, the Commissioner is coming.

This is a new field—an emerging field—environmental epidemiology?

Dr. MELIUS. Yes. Although studies have been done in the past of air pollution and respiratory disease and matters like that, I think that it is only within the past 10 to 15 years that we have really started to actively pursue this area, and probably since the Love Canal incident——

Senator MOYNIHAN. We'll get to that.

Dr. MELIUS. It has focused much attention.

Senator MOYNIHAN. The New York State Department of Health was a pioneering institution in epidemiology generally?

Dr. MELIUS. Correct. It has always had a long history of expertise and activity in that area.

Senator MOYNIHAN. When we go back to the epidemiology of communicable disease——

Dr. MELIUS. Correct. We also pioneered in developing a state cancer registry to conduct studies of cancer across the State. And, since Love Canal, we have also expanded our efforts in environmental epidemiology.

Senator MOYNIHAN. If I can—this is just banter here, but I was in the Governor's office in the mid-1950s, and Bill Hadden, from your department, and I got together on the epidemiology of automobile collision trauma, and I guess we gave the first papers on that at Syracuse University in 1959, with some consequences, I think.

Dr. MELIUS. I think we've seen how that issue has come up more recently. Actually, the State Health Department is also working with a number of county departments to develop safety and injury-related epidemiology and preventive programs.

Senator MOYNIHAN. It was just the whole new world that emerged when you stopped referring to these things as "accidents"—which is a pre-scientific term—and started saying, "How many of these events occur in the course of an operation of a system," and get some regularities. We did a fairly crude study, by your standards, but it was the only thing available. We came up with the impression that whilst an injury-causing collision would be rare in the experience of the individual, as I put it rather graphically, but the point was made that 32 percent of automobiles ended up with blood on them. Some Canadians have since, I think, found a higher proportion. That particular machine will, with a very high order of regularity, be involved in something that causes injury, and so you start fooling with that machine.

Dr. MELIUS. And you mentioned earlier how we tend to get lost in the jargon of regression and so forth. I think some of the more direct epidemiology, some of the more forceful studies that we can do, can lead to some major changes, hopefully, in how we approach and prevent these problems.

Senator MOYNIHAN. We had national legislation within six years of that paper. To say "you end up with blood on them" is a little more impressing. Guess who is entering the chamber?

Commissioner, we have been waiting for you. Doctor Melius and I have been talking about old times in the Department of Health.

It is very good of you to come here today. We know that you were snowbound a bit in Albany, and we welcome you here, sir. I think, as was our original plan, we're going to hear from you first, and then we are going to hear from Doctor Melius.

STATEMENT OF THOMAS C. JORLING, COMMISSIONER, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Mr. JORLING. Thank you, Senator. I do apologize for being late.

Senator MOYNIHAN. Not at all.

Mr. JORLING. It is a pleasure to be here. As you know, I serve as the Commissioner of the Department of Environmental Conservation for the State of New York. I think it is important for us to discuss the Department's programs and activities relative to the Kodak Park facility in Rochester and facilities owned and operated by the Xerox Corporation in Monroe County.

On the Xerox situation, let me first comment on the general issue of secret settlements between litigants in environmental lawsuits. This practice is antithetical to the "right to know" concept, which holds that the public is entitled to know the identity of and the dangers associated with chemicals used by industries in their communities.

Shielding information from the public domain creates obstacles to scientists seeking to discover the true effects of exposure to toxics, and to regulators like myself seeking to develop comprehensive regulatory and enforcement strategies. The Department of Environmental Conservation is neither a party to such settlements, nor is it bound by them.

Any and all DEC documents on the Salt Road spill are available for public inspection. They will show contamination of the groundwater in the vicinity of the Salt Road complex consisting primarily of trichloroethylene, better known as TCE, and toluene.

The majority of the off-site contaminant migration has been to the east of the Salt Road complex. Xerox has purchased most of this property since the plume was discovered. The southeasterly boundary of the plume has not been pinpointed; the data necessary to do so will be collected pending agreement by the property owners to allow Xerox access for testing.

Last Spring, Xerox signed a consent order with the Environmental Protection Agency requiring investigation of the extent of the contamination and completion of a corrective measures study.

A report on the completed investigation has been submitted and it is under review. Submission of the corrective action study is expected within the next few months.

Xerox presently has 106 monitoring wells for the Salt Road complex which are regularly sampled. Interim corrective measures include twelve recovery wells six of which are currently pumping.

In the early summer, the public will have an opportunity to be formally involved in decision making regarding the investigations and remedial activities at the Xerox Corporation's Joseph C. Wilson Center for Technology, including the Salt Road complex. By that time, the department—DEC, that is—will be jointly publicly noticing, with EPA, draft hazardous waste facility permits for the Xerox facility. The draft permits will contain proposed conditions furthering investigations and remedial activities by Xerox.

We will hold a public availability session, a legislative hearing, and an issues conference. These permit procedures will provide the affected community a formal mechanism to review and comment

on what Xerox will be required to do in the future. But, again, Xerox' submissions, including all environmental data, are presently available for public review.

Turning now to Kodak Park, this is one of the largest manufacturing facilities in the country. It is an enormous complex of structures, roads, buildings, pipes, and tanks occupying an area nearly seven miles long and up to one mile wide in the City of Rochester and the Town of Greece. The company has been operating in these communities for more than 100 years.

About a year ago, Eastman Kodak reported to DEC information indicating contamination of groundwater in wells at the Kodak Park facility. This revelation triggered a chain of events that have preoccupied this community.

Let me take this occasion to provide an assessment of the progress made to date in identifying the extent of the contamination and developing and implementing remedial measures.

Concerns in and around Kodak Park involve groundwater contamination by organic compounds—some being volatile—and air emissions, both organic and particulate, into the ambient air. Most concerns relate to short-term and long-term health impacts, to environmental impacts, and to impacts on property values. Since much of the area surrounding Kodak Park includes residences, schools, and commercial establishments, these concerns are of paramount importance to the community.

From the outset, it was clear to me and my staff that the sheer size and complexity of Kodak Park's operations and associated environmental problems required an unusual organizational approach. Our agency, like USEPA and most other state environmental agencies, is divided into units which administer and implement specific statutory authorities, such as our air, water, and hazardous waste divisions.

I recognized early that the need at Kodak Park was for a multidisciplinary team of professionals working as one unit to simultaneously administer all of our ongoing regulatory programs, to conduct inspections, review work plans for groundwater remediation, and oversee the remediation efforts.

In June of last year, we organized such a team, comprised of talented geologists, engineers, and attorneys in our region office here in region eight in Avon, and our central office in Albany. I have been personally involved on a day-to-day basis in all facets of the project, and, through the hard work and discipline of my team, am confident that we are successfully coordinating all aspects of the Kodak Park issue.

I also recognized, very early in the process, that citizen involvement was essential. Currently there are several organized citizen groups in the residential areas surrounding Kodak Park. They have spent countless hours educating themselves about the complex technical issues and regulatory programs, and contributing their valuable input to our department and to other agencies.

DEC has a strong commitment to citizen participation. In line with that commitment, we have developed a citizen participation program for Kodak consisting of two elements.

Last year we established a multi-agency technical committee to review documents and issues related to all Kodak Park projects.

The committee includes representatives not only from our department and the State Health Department, but also from Monroe County, the City of Rochester, the Town of Greece, and, most importantly, from the citizen groups themselves.

This committee has enabled the citizen groups to participate fully in the activities of our agency to an extraordinary degree. I am proud to report that the citizen groups have made the most of this opportunity and have contributed immeasurably to public understanding of what our agencies are doing at Kodak Park and, I believe, to the quality of our effort.

Secondly, Eastman Kodak Company is providing funds for private consultants to the citizen groups. These funds are passed through a not-for-profit corporation affiliated with the City of Rochester.

This is one of the first times in New York State that a private company has funded a consultant for its citizen neighbors. This enables the citizens to obtain top-notch advice from an independent consultant who has no ties to either the regulatory agency or the responsible party.

Working within the organizational structure and with the citizen participation efforts I have described, the Department's activities at Kodak Park fall into several categories, and I'd like to describe them briefly if I could, Senator.

Senator MOYNIHAN. Please do.

Mr. JORLING. In April of last year, DEC received an application for a new air permit necessary for expansion of film-making capacity at Kodak Park, roughly a $250 million investment.

In December, after analyzing a draft environmental impact statement prepared by Kodak, the Department issued a draft permit, which allows Kodak to expand its film-making base, but which also includes stringent permit requirements. Kodak must reduce methylene chloride emissions by 30 percent by the end of 1990, and by an additional 40 percent——

Senator MOYNIHAN. Can I ask you a question, Commissioner?

Mr. JORLING. Yes.

Senator MOYNIHAN. Methylene chloride emissions by 30 percent? Is that from Kodak Park?

Mr. JORLING. From the overall Kodak Park facility—and by an additional 40 percent by 1995. The draft permit also establishes target reductions of 50 percent in fugitive air emissions, to be achieved by 1990 for the film loop, and by 1991 for the remainder of the plant.

I would add as an aside, Senator, that one of the findings from the SARA title III right-to-know reporting process, has been that the single largest source of toxic emissions from major industrial plant facilities in New York State and across the country is fugitive air emissions of toxic substances. We have addressed that in this permit. In my judgment, it has been the first time a fugitive toxic air emission program has been incorporated into a permit.

Senator MOYNIHAN. I have not heard of another. Yes.

Mr. JORLING. So that we are addressing, in New York State, the fugitive emissions of toxic pollutants. The Governor announced an initiative on this issue this year in his State of the State Message.

It is an area to which you may wish to direct some attention in the context of the Clear Air Amendments, as well.

Senator MOYNIHAN. Right. Good.

Mr. JORLING. The draft permit also requires an on-site monitor to be funded by Kodak, and for an extensive ambient air monitoring program.

Secondly, I'd like to touch on chemical storage tanks. Kodak has submitted to the Department—and we are reviewing—the first phase of a five-year, $100 million program to remove, replace, and upgrade all chemical storage tanks at the Kodak Park facility.

Presently, Kodak has 1,006 underground chemical storage tanks which they propose to replace with 600 tanks, all 600 meeting state-of-the-art and all regulatory requirements. This activity will replace the entire chemical management infrastructure at Kodak Park to prevent tank and associated releases of chemicals.

Lastly, the remediation activities: there are currently four sites within the boundaries of Kodak Park that have been added to the New York State inactive hazardous waste registry. They are, as follows:

The Kodak Park east site has been added to the registry as a class 2 site—and these terms, Senator, refer to the State of New York's Superfund remediation program. Class 2 sites are those which represent a significant threat to the health or the environment and a remediation effort is required.

Kodak has signed a consent order concerning the excavation and disposal of soils from the construction of their new film-making facility at this site.

Second, the Kodak Park west site—the so-called "building 115 tank farm"—has been added to the registry, also as a class 2 site.

In August of 1988, a consent order was signed to formalize the remedial investigation/feasibility study that had already commenced. The order included a requirement that Kodak perform a gas vapor study to identify the location of the groundwater contamination plume and to enable the Department of Health to target homes for indoor air sampling.

After months of reviewing technical procedures and preliminary test data, the Department of Health is about to commence oversight of an indoor air sampling in the Rand Street area. This sampling is expected to yield data that will allow State and County health officials to determine whether there are health risks associated with inhabiting any of the nearby homes in the Rand Street area.

The Weiland Road site is currently classified as 2(a) under the State program. That designation means that it requires further investigation to determine whether a significant threat to the health or the environment exists. A site investigation has been conducted, and the results are now under review.

Another site, the KPM site, has been listed as class 2. As an interim measure, Kodak has installed a groundwater recovery well and preliminary samples collected along the fence line bordering the Koda Vista neighborhood show very low levels of these organic constituents.

Kodak has submitted a work plan to upgrade existing wells and install new wells to better define the groundwater quality. Soil

vapor and indoor air testing will also be conducted at residential homes bordering the plant.

Lastly, in August of 1988, DEC and Kodak, as well as Monroe County, signed a consent order to address the handling of contaminated spoil from a tunnel project underlying portions of the Kodak facility—a project which is being constructed as part of the county's combined stormwater abatement program. This order requires adherence to specified procedures for sampling, handling, and the storage of the spoil.

Despite our progress during the past year, much remains to be done. To date, most of our efforts have centered around the Rand Street area. We need to devote more attention to the Koda Vista neighborhood and other residential areas bordering Kodak Park. We also need to work with Eastman Kodak and local agencies to develop better procedures for prompt reporting and cleanup of chemical spills and air releases at Kodak Park.

We are preparing to meet these new challenges with the same dedication, skill, and hard work that our employees have demonstrated during the past year.

Before I conclude, I would like to say a few words specifically about the School 41 situation. Nothing tears a community apart emotionally as much as fears that their children are being exposed unwillingly to dangerous substances. I empathize with the parents and teachers who are frustrated by the events since Kodak's solvent spill last December.

The spill occurred when a pipeline ruptured at the Ridge Road underpass near School 41. Approximately 30,000 to 60,000 gallons of solvent escaped, consisting primarily of methylene chloride, approximately 75 percent; methanol, 15 percent; and a variety of other substances.

Four clusters of groundwater monitoring wells, three wells per cluster, were installed on the School 41 property, and a fifth cluster was installed on private property just north of the school. Contamination identified in the soil samples and air samples taken from the wells prompted county health officials and the State Department of Health to perform indoor air testing at School 41 and at a comparison city school not in the immediate vicinity.

The initial air sampling data, as evaluated by the state and county health departments, indicated that there are no unreasonable health risks associated with continued use of the building. However, in order to confirm the initial data and better evaluate long-term risks, Kodak and the various agencies—including my own—are collecting additional air, soil, and groundwater data at School 41. My staff are giving this activity the highest priority in order to resolve lingering community concerns about the safety of the school.

Finally, I would like to point out that a project of this size and complexity has required a tremendous commitment of State resources and personnel. It has forced me to re-order priorities and to place extraordinary demands upon my staff. We have accepted the enormity of the challenge, and will marshal every available resource to ensure the ultimate protection to the people and to the environment of Rochester.

Senator, I appreciate the opportunity to summarize the Department's response to the enormously challenging task of monitoring the environment in and around Kodak Park.

I would be happy to answer any questions that you might have.

Senator MOYNIHAN. You couldn't be more generous.

Let me just say that yesterday morning I met in Erie County with County Executive Dennis Gorski touring the Bethlehem Steel plant site along the coast in Lackawanna. It is about eight miles. It is an equivalent of Kodak Park, but from another era. It opened in 1902 and closed in 1982. The butchery of that operation for 80 years is hardly to be believed. What has yet to be discovered in the soil there, I don't envy you that enterprise.

I want to get one thing very clear, because it is important, and people here will want to know. We heard from the Monroe County Health Department, and quite emphatic statements that there were no health problems associated with air quality at School 41, and obviously very able and experienced physicians and public health doctors said that. You now say this is the State's view, as well as the county view? They spoke for the county, and you say here that the additional air sampling data, as evaluated by the State and county health departments, indicate that there are no unreasonable health risks associated with the continued use of the building. So that's your judgment? All judgments are interim, and things can change. That's your judgment?

Mr. JORLING. That is our judgment at this time, Senator. As you point out, it is a judgment that has to be continuously reviewed, because it has to be formed by the most recent data. But that is the current view that we have, and I believe it is shared by the State Health Department concerning School 41.

Senator MOYNIHAN. Before you came in, we were talking about the RCRA legislation. It is up for reauthorization this year, and we would like to learn. As we get experience in this area, there may be things we would want to add to the statute. We would hope that—this is not a small exercise—we can look to you to tell us what you think we might be wise to add to the statute.

I want to specifically speak to this question of the right-to-know and sealed court documents. The county health official just said he'd like to see them, and at least be able to interview the people involved. It does seem a bit of an anomaly. This is public health, not a private concern. There are public concerns.

I don't have enough feel for the case law, but evidently there has never been a precedent for unsealing this kind of agreement. What do you think?

Mr. JORLING. As I pointed out in the statement, Senator, the notion of any data——

Senator MOYNIHAN. You said asbestos.

Mr. JORLING. Regarding chemicals and exposure being sealed we find antithetical to the public's right to know. It is certainly antithetical to both the body of law at the federal level and the body of law at the state level with regard to the access that citizens have to data collected using public resources or under the authority of the public.

With respect to the particular order, it was private litigation, and the sealing, I have a suspicion, related to many things and

probably only incidentally to the chemistry involved, because the chemistry has, primarily, been developed pursuant to enforcement orders from EPA and state authorities, and that information is available to the public.

I have a suspicion that the reason it was sealed was for the nature of the financial transaction.

Senator MOYNIHAN. But we don't need to know that.

Mr. JORLING. That's correct. I think what I would urge in the context of both federal and state legislation is to ensure that information required to be provided under the statute as accessible to the public. As you know, in federal law and in state law we have provisions that mandate disclosure of information acquired from effluent and ambient sampling.

Senator MOYNIHAN. Yes.

Mr. JORLING. There is an exception to this requirement when private firms assert proprietary information claims in information submitted to public authorities—proprietary in the sense that if the information were disclosed the business could suffer a competitive disadvantage with respect to given chemical formulation.

But that is a very narrow exception and it should be kept very narrow. The emphasis should be on public disclosure. I think this situation presents the opportunity to review these laws and to determine whether they are adequate.

Senator MOYNIHAN. Maybe you'd do the committee the service—we've done it before—of letting us know whether you think some statutory measures should be considered. We're going to be making some laws this year.

I was remarking to some friends the other day on this whole subject of public health. Doctor Melius said we have Doctor Coop to thank in recent years for reminding us that the public health service is a uniformed health service. They are officers, and they are there to tell you what you are going to have to do. They would like to persuade you first, and then they will order you second. That is how we got rid of dyptheria and typhoid.

I think we will now turn to your colleague.

Doctor, again we welcome you.

STATEMENT OF JAMES MELIUS, DIRECTOR OF OCCUPATIONAL HEALTH AND ENVIRONMENTAL EPIDEMIOLOGY, NEW YORK STATE DEPARTMENT OF HEALTH

Dr. MELIUS. Thank you.

I send the regrets of Doctor David Axelrod, our health commissioner, who had another commitment today and wasn't able to attend the hearing.

I am the director of the Division of Occupational Health and Environmental Epidemiology, which is a relatively new division within the New York State Department of Health. I have been with the Health Department for a year and a half. Prior to that, I spent approximately eight years with the Public Health Service, the National Institute——

Senator MOYNIHAN. In uniform?

Dr. MELIUS. Not in uniform, actually, but with the uniformed services.

Senator MOYNIHAN. I thought you had a uniform in the closet somewhere?

Dr. MELIUS. No. Actually, I was always part of the civil service.

Senator MOYNIHAN. I see.

Dr. MELIUS. I was unique in that, for various reasons.

And I worked with the National Institute for Occupational Safety and Health.

Rather than reiterate what some of the other witnesses have already presented today, I would just like to very briefly summarize my testimony and maybe spend a little bit more time on health studies.

The New York State Health Department works very closely with the Department of Environmental Conservation, Monroe County Health Department, and other agencies involved in any particular environmental health problem here in the Monroe County area.

So our role is as a consultant, in some cases, to come and do actual sampling and conduct health studies in some cases, and in some cases it is purely an advisory role. It really depends on the exact situation.

I think it is important to point out, in looking at the Kodak situation, that the location and size of the facility and its proximity to residential neighborhoods contribute to the difficulty and complexity in dealing with environmental health problems there. The public lives right next door to the facility, and any environmental release can impact the public's health very quickly and much more directly than it can from a more isolated type of facility.

As we all know—and I think as you described with the steel complex in Buffalo—that's not an unusual situation in this country and most other industrialized countries. We like to live near where we work. Facilities grow over time.

However, that type of arrangement does put some pressures on us in terms of responding to these situations and in making that immediate response more important.

In the Kodak Park situation, we have been involved with the Rand Street situation, we have been reviewing the environmental impact statement that Kodak has submitted in regard to expansion of their facilities, and we have been very involved in the School 41 situation. There are a number of other hazardous waste sites related to Kodak Park which Commissioner Jorling just mentioned, and we are involved in reviewing information on them.

We have a very close working relationship with DEC to review all environmental data from hazardous waste sites—particularly as it pertains to health effects, and as a way we can prioritize what needs to be done so that we can assure that whatever environmental investigation gets done appropriately addresses the involved environmental health issues involved.

As Doctor Bell has already described, we also are working very closely with the county health department, with the citizens group, and with an outside technical advisory group to develop health studies to be responsive to the concerns of the community here about what impact methylene chloride and some of the other chemicals released from Kodak may have on their health, and to develop as quickly as possible studies that will address to what

extent these releases from the past or from the present may be impacting their health.

We have set in place an arrangement now that allows for the orderly and straightforward progression of these health studies. They will take time to conduct, but we believe we have a process in place and a plan in place that will address these concerns.

Senator MOYNIHAN. I wonder if I could just stop you there to move you toward the final parts of your testimony, which is very important. We don't do this very well yet, do we?

Dr. MELIUS. That's correct. I think we've learned a lot about how to do it well. We have not done it well a lot. We don't have a lot of experience in doing it well. I think that is true on a national, and even an international, basis.

Senator MOYNIHAN. You heard me remark earlier that we are very interested to see if we can't move our whole environmental mode towards a much more science-based activity than perhaps it has been. We will depend on a little from you, sir.

Senator MOYNIHAN. You mentioned Love Canal. I don't suppose you could find a natural experiment more adaptive to epidemiological modes of inquiry, but could I ask you, without any prejudice and not the slightest hint of hostility: what have we learned from Love Canal?

Dr. MELIUS. We've not learned as much as we should have learned.

Senator MOYNIHAN. Have we learned anything?

Dr. MELIUS. I think we've learned that there was significant environmental contamination, we've learned that some number of people living there were exposed to that contamination over the years.

Senator MOYNIHAN. That we knew when we passed the legislation.

Dr. MELIUS. Correct.

Senator MOYNIHAN. But what happened?

Dr. MELIUS. We've done a few health studies there at the time, really in response to the crisis of Love Canal. Those studies were conducted in the late 1970s and early 1980s.

Senator MOYNIHAN. Right.

Dr. MELIUS. We learned something about effects on liver function, and we learned something about some reproductive effects from exposures there—at least from some of the early epidemiology.

Senator MOYNIHAN. You have?

Dr. MELIUS. Yes. There were studies done by the New York State Department of Health, some later studies by the Centers for Disease Control that addressed some of the health issues there.

What we are embarking on now is an effort to update and expand those earlier studies. Roughly ten years has passed since Love Canal was discovered.

Senator MOYNIHAN. Right.

Dr. MELIUS. People were exposed there for a longer period of time.

Senator MOYNIHAN. Like a half century?

Dr. MELIUS. Yes. We estimate, in our initial questionnaire studies that were done of the population there, there is on the order of

3,000 to 5,000 people that were living in Love Canal during the period of time when there was contamination present—both current residents at the time of the evacuation and later efforts, and past residents living in those homes.

We are starting now with studies to develop a registry of those, a listing of those people, and to be able to develop follow-up health studies to see what their health status is at the present time.

Senator MOYNIHAN. And this could go on for half a century?

Dr. MELIUS. Certainly. One of the problems with environmental exposure, as you well know, is that we may take care of the problem in terms of the spill or cleaning up the environment, but the health risks can be there for a number of years for the individuals involved. For asbestos it is up to 50 or more years after exposure.

Senator MOYNIHAN. Right. We just have to learn the rigor of longitudinal study. It doesn't mean you don't act as Commissioner Jorling has acted, clearly, in Monroe County with great energy and great determination to do what has to be done. But to learn what happened—if you want to know what happens to a person over 50 years, it takes 50 years.

Dr. MELIUS. Correct. And we believe now is an opportunity time to start a follow-up study, and we are in the process of doing that. We've gone through all our files in the health department, all the information collected, and we're about to start that follow-up health study of those residents. We've met with the residents.

It is very interesting. When we first announced the study it got some attention in the media. We received calls from all over the country from people who have lived there in the past, or who were children raised in that area, wanting to know what we were doing and wanting to be included in any follow-up health study that we did.

So I think it is important that we recognize that people will continue to be concerned about these exposures for many years, and rightfully so.

Senator MOYNIHAN. And properly so.

Dr. MELIUS. And we need to develop an appropriate response to follow-up and provide them with information.

Senator MOYNIHAN. Can I ask you this? The committee would be very much appreciative if we could hear from Doctor Axelrod—and perhaps we could hear it jointly, Tom, from yourself and Doctor Axelrod—that is the present state of research findings from Love Canal. You mentioned reproduction and you mentioned——

Dr. MELIUS. Liver disorders.

Senator MOYNIHAN. We'd like to know that. It would make a difference to us. We were sort of disheartened when we learned of Lewis Thomas 'committee he chaired, which was not very flattering—it was before either of you came——

Dr. MELIUS. There were difficulties in responding to that incident. I think one of the things we are learning in environmental health is that conducting more health studies, following these people over time, learning more about what the actual impact on their health, is very important in helping them to deal with these issues, but also for us to learn what the proper response is and how we appropriately deal with these issues.

Senator MOYNIHAN. You have to get a control group, but you will?

Dr. MELIUS. We have control groups. The epidemiology can be done. There are logistical difficulties, sometimes problems getting computer tapes, as we have heard. But basically it can be done. It is a question of providing the appropriate support and deciding that we should do it.

I think one of the problems that I've seen over time with Superfund—and even with the reauthorization of Superfund—is that it has still not provided the right funding and enough health studies to address these concerns.

Senator MOYNIHAN. I absolutely agree. I mean, of the $9 billion, $5 billion is going to lawyers, and lawyers don't know anything about this. I don't know what else has happened.

Well, why don't you let us know what you think we should do. Why don't you get Doctor Bell's tapes going.

If those tapes had the information about what was going to happen in the stock market this afternoon, somebody would have them now.

Dr. MELIUS. That's certainly true.

Senator MOYNIHAN. The commissioners will decide whether to send us the information jointly or individually.

We're going to hear from you about whether we might have some statutory response to this whole question of sealed data where public health information is involved.

It seems to me that this has been an opportunity to let the people of Monroe County know that their State government is very actively engaged in this, that the firms involved seem to be cooperating, that we've learned what we can learn, and by spring we're going to know something more, and that the enterprise has just now begun. Well, it has been underway for years, and is going to be around for a long time.

I think that those of you who have to do this work are entitled to a certain kind of understanding and commitment from the legislative branch that understands that it takes time.

I'm sure you've heard enough about people wanting answers now. Well, answers now won't be good answers. That's not the basis on which the New York State Health Department created an international reputation. We'd still be running around—if you had to have answers now, before they are ready, we'd still have typhoid around.

Senator MOYNIHAN. Thank you.

Senator MOYNIHAN. Commissioner, would you like to make one last remark?

Mr. JORLING. Just a few concluding points, Senator.

First, I would like to submit for the record a description in our report on our hazardous waste remediation plan.

Senator MOYNIHAN. We will now make that a part of the record.

[The material referred to follows:]

New York State
Hazardous Waste Site Remedial Plan

September, 1988

New York State Department of Environmental Conservation
Mario M. Cuomo, Governor
Thomas C. Jorling, Commissioner

Division of Hazardous Waste Remediation
50 Wolf Road, Albany, New York 12233

The following is excerpted from the above named report. The report in its entirety is retained in committee files.

99-392 0 - 89 - 2

Executive Summary

The Department of Environmental Conservation (DEC) carries out New York State's program to clean up sites where hazardous wastes were dumped in the past. Over the thirteen-year life of this remedial program, DEC expects to investigate some 1,400 sites and to clean up approximately 500. During FY 1987/88, the remedial program moved into high gear and is on schedule.

Accomplishments

- 1,193 sites (92 percent of the total number of sites listed to date in the registry) are undergoing investigation, remedial or enforcement action or have been remediated.
- Action is complete at 301 sites; 83 sites have been cleaned up and 218 sites did not require cleanup and were delisted.
- The rate of investigative and remedial work has accelerated.
- Remedial projects are completed or underway at 325 sites—a gain of 44 over last year.
- Approximately 50 projects per year are entering the remedial program—a pace that will achieve the plan's goal of cleaning up all the state's hazardous waste sites by the year 2000.
- Responsible parties continue to play a major role in cleaning up sites. To date, responsible parties have undertaken or paid for remedial work at 235 sites, state Superfund paid for 39 remedial projects, Federal Superfund paid for 42 remedial projects and municipalities funded 9 remedial projects.
- Collaboration among the Department of Law, the Department of Health, and DEC's divisions of Environmental Enforcement and Hazardous Waste Remediation has been extremely effective in convincing responsible parties to pay for cleanups.
- During FY 1987/88, DEE negotiated 30 consent orders with responsible parties and DOL litigated 24 cases involving violations of environmental law.

Program Organization

- A new Division of Hazardous Waste Remedition in DEC consolidates and focuses resources for cleaning up hazardous waste sites.
- A new Deputy Commissioner improved coordination among all state agencies active in hazardous waste remediation.

- A strategic plan was developed to guide and coordinate remedial work among the three agencies and an interagency task force was established to coordinate state and Federal remedial activities.
- New technical developments, including a model for assessing site priority and the establishment of quality assurance procedures, are increasing program effectiveness.
- A public participation and education plan was developed for hazardous waste site remediation projects.

Program Forecast

- During the next three years, DEC expects that 140 Phase I investigations will be started, along with at least 281 new Phase II investigations, 146 RI/FS projects, 123 design projects and 86 construction projects.
- During FY 1988/89, the program workload will include remedial projects carried over from preceding years, as well as new project starts. The workload is expected to include 550 Phase I and Phase II investigations and 246 RI/FS, design and construction projects.
- In FY 1988/89, DOH expects to review 110 Phase I, 45 Phase II and 153 RI/FS reports.
- In FY 1988/89, DEE expects a 20 percent increase in consent orders over last year and DOL anticipates handling 33 cases involving violations of environmental law.

A remediated site in Mechanicville, New York

Mr. JORLING. I think you'll find it contrasts with the federal program in that we've been much more aggressive in New York State in going after the responsible parties, and I think successfully so. I think a comparative look at the federal and state programs would be useful to you.

On the specific point about epidemiological work and health risk assessment and measurement, your bill (S. 233) would contribute and help to improve dramatically the ability to make the kinds of assessments that need to be made.

For instance, the Love Canal case contrasts with more recent cleanups in that, the public sector has basically borne the cost of all of the work that has gone on there. As you know, there is continuing litigation with responsible parties that has not yet lead to a significant recovery of money.

In the case of Kodak, one of the things that was very important in the insurance of the air permit was the fact that Kodak had, on their own, amended on the responsibility for conducting some very good epidemiological work. I feel I can pass judgment on that because there was a scientific review panel independently convened to review the quality of the units. Kokak conducted epidemiological test on their own employees using family histories associated with methylene chloride exposures. The fact that they had that kind of data made it much more possible for us to make the necessary judgments.

My last point concerns the lessons that we learned from Bethlehem Steel and Kodak and all of these exercises, whether they be the past lessons of the Love Canal sort, or the current continuing manufacturing operations represented here in Rochester with Kodak and Xerox.

The first point is that the legacy of a Bethlehem Steel or a Love Canal was created when our attitudes towards the management of chemicals were very different. I think we have now learned that prevention is crucial, and that steps should be taken to make ours a chemically tight society—that we act to contain, or to eliminate discharges and release, rather than the practice of the old days—and in some respects, even currently—which is to allow the degrading activity, the release, the dump, or whatever, to occur and then take actions only after we discover a problem.

The human costs, the environmental costs, and the economic costs of the past legacy are horrendous. To clean up a site like Love Canal, where we have already spent more than $40 million only to seal the facility, indicates that past practices and our attitudes towards the management of chemicals is wrong, and that we have to tighten controls over chemical useage by preventing releases to the environment. That principle in embodied in the Federal Clean Water Act. We're moving toward it, and I urge that you move further toward it in the Clean Air Act this year by adopting stringent amendments on toxic chemical controls. That's the lesson that comes clear: tighten our management of all kinds of chemicals and materials. And when we move to that point, I think our society will be much more sustainable than it is now.

The difficult questions frequently posed to public officials by community groups or citizens in whether our responses are necessarily qualified.

They're relative answers. We hope we can continue to make our answers persuasive, but it takes sound scientific analysis, good, hard, technical work, and that sound analysis and good, hard, technical work often takes time to generate, which breeds frustration. From a community standpoint, people wonder why the government can't act very quickly and expeditiously. Some of that time is consumed in the effort to make our answers credible, to make them persuasive, to make them defensible.

In the case of Kodak, the work that is going on is moving faster than any remediation project that I have been associated with at either the Federal or the State level, But, from a citizen's standpoint in wanting to know answers now, it still looks time-consuming. But we have to have reliable answers. The quality assurance and quality control efforts have to be sound.

Senator MOYNIHAN. Yes.

Mr. JORLING. Although many times our answers must be qualified, our goal and responsibility is to be persuasive. Whether our answer is that conditions are safe or that they are not safe, those pronouncements must be backed by sound scientific data. That's our task.

Our work here with the State Department of Health is very good. I think we're all suffering from the fact that people wax and wane in their willingness to contribute resources to these things as soon as the quick answer is given. It is a long-haul exercise we're involved in and, as you point out, the legislature has to stay with us over that long haul.

Senator MOYNIHAN. Well, let us hope we do.

What do you say we have some applause for what Mr. Jorling has said.

[Applause.]

Senator MOYNIHAN. I see the lawyers are applauding.

Sir, you know with what value and respect the Committee on Environment and Public Works regards your views. Please write us about the Clean Air Act and what you'd like to see in it, because we are going to have a Clean Air Act this year finally.

We're very fortunate to have such distinguished public servants here in this committee hearing and in our State.

We thank you, Doctor Melius.

We thank you, Commissioner Jorling.

Mr. JORLING. Thank you, Senator.

Dr. MELIUS. Thank you.

Senator MOYNIHAN. We're running just a little behind, and, owing to airline deregulation, there are no airlines any more in and out of Rochester, and I have to be in Washington, so we're going to hear now from Doctor William Sutton, who is the senior vice president and Director of Corporate Relations at Eastman Kodak.

Dr. Sutton, if you'd like to bring your associates with you, please do.

Dr. SUTTON. Thank you. I will.

Senator MOYNIHAN. Doctor Sutton, do I have the names of your associates?

Dr. SUTTON. Yes you do, Senator, but let me introduce them. On my left is Mr. Robert Grose, who is Manager of Operations at

Kodak Park, on my far right is Doctor Hays Bell, Vice president and Director of the Kodak Health and Environmental Laboratories, and on my immediate right is Mr. Vern Dyke, who is Vice President and General Manager of sensitizing operations at Kodak Park.

Senator MOYNIHAN. Of sensitizing?

Mr. DYKE. Sensitizing component, Senator.

Senator MOYNIHAN. Doctor Sutton, go right ahead.

STATEMENT OF WILLIAM SUTTON, SENIOR VICE PRESIDENT AND DIRECTOR, CORPORATE RELATIONS KODAK, ACCOMPANIED BY HAYS BELL, VICE PRESIDENT AND DIRECTOR OF HEALTH AND ENVIRONMENT LABORATORIES, KODAK: AND VERNON DYKE, VICE PRESIDENT AND GENERAL MANAGER OF SENSITIZED COMPONENT MANUFACTURING, KODAK; AND MR. ROBERT GROSE, DIRECTOR OF SITE OPERATIONS, KODAK PARK

Dr. SUTTON. I will be brief, Senator, so that we can move on to your questions.

You've already received a good deal of information from the people that proceeded us and in advance, and I think you could tell, Senator, that we are cooperating with both the county and the State agencies.

As you know, we have conducted a large number of tests and studies on the situations that have been described to you this morning. We have brought some of those tests with us. We will be pleased to leave them with you for your record if you want them.

Senator MOYNIHAN. You have to give us the things that you think most valuable for us, and we will put those in the record. But that's probably $10,000 worth of printing.

Dr. SUTTON. Probably you would not want to be burdened with those, but I do want you to know the results are available.

Senator MOYNIHAN. That is much appreciated.

Dr. SUTTON. Much of our summary is in our full report.

In my brief comments here I am going to concentrate primarily on the groundwater issue, as I understood that was your primary interest.

Senator MOYNIHAN. Yes.

Dr. SUTTON. But you may want to address the air issues as well, and I think we'll concentrate a little bit here on the soil vapor tests in the area of Rand Street.

As you heard, those tests have been reported—both those taken at Rand Street and those taken in the comparison area that was selected by the government agencies as, if you like, a control area for the reports.

There is reason for considerable optimism in the results of those tests, we believe. One, the soil vapor at each location was found to contain extremely low levels of chemicals. Two, the chemical levels found at Rand Street did not differ greatly from those found in the comparison area. Three, those data don't give any indication that the chemical contaminants detected in the groundwater in bedrock 32 to 22 feet below the surface have migrated up through that bedrock and that soil into the homes of Rand Street.

Senator MOYNIHAN. Do you want to help a civilian in that regard? The solvents in bedrock, would they be naturally occurring?

Dr. SUTTON. Let me go back with a little history.

Wells dug on Kodak property at the fence line adjacent to the Rand Street area, at a depth of 22 to 32 feet, were sampled for chemicals, and in those samples they found part per million concentrations of methylene chloride and certain other solvents. Methylene chloride is fairly characteristic of the operations at Kodak Park.

The flow is generally felt to be away from Kodak Park, so we assume—but do not know, because we have not sampled off the site at that level—that there is a plume of contaminated groundwater—low levels of contaminants down in the bedrock at that depth. This report is the one that generated all of the process that you have heard about this morning.

Senator MOYNIHAN. I've got it.

Dr. SUTTON. And the soil vapor tests were taken not to determine health hazards, but to determine where sampling should be done in the homes to determine whether or not the low levels of solvent in the ground water might be migrating up and exposing the residents to——

Senator MOYNIHAN. And are the findings, so far, negative?

Dr. SUTTON. The findings so far are negative.

We believe that those findings, coupled with the favorable results at School 41 which you heard about, and at the Hoover Drive School, and something less well-known, the results of thousands of air samples taken in the course of the construction of the sewer tunnel project, which is on the perimeter and under Kodak Park——

Senator MOYNIHAN. That's a county project?

Dr. SUTTON. That is a county project.

Senator MOYNIHAN. This is the overflow?

Dr. SUTTON. Yes. There have been approximately 7,000 samples taken in the course of that project. Those favorable results suggest that the extent of contamination is much less than had been feared.

I might also add that——

Senator MOYNIHAN. Are they summarized anywhere, Doctor Sutton? People would like to know.

Dr. SUTTON. Hays, are those tests summarized for the tunnel project.

Senator MOYNIHAN. The air tests?

Dr. BELL. No.

Dr. SUTTON. They certainly can be. We will see that they are summarized and make them available to you, as well.

Senator MOYNIHAN. This is something that, if it is something that is reassuring, we should know that.

Dr. SUTTON. We do think it is good news. It is interesting to note, I believe that it was the tunnel project and its beginning that led Kodak to drill deep wells in the area where the tunnel would go in order to assure ourselves that there would not be exposure during the tunnel project, and those wells on Kodak property at those depths gave us the first indication that there could be contamina-

tion at those depths. Those results were recorded at that time. They ultimately lead to the sequence of events that you have heard about.

I might also add that there are no drinking water wells in the Rand Street area. So, the way the data is beginning to play out, it would appear that it is still very possible, as we believe and fervently hope, that there is not exposure in the Rand Street homes from the low levels of contamination in the water in the bedrock deep in the bedrock.

We realize, however, that there is still legitimate concern, and that there is still much work to do. Soon the indoor air sampling will commence on the north side of Rand Street.

I can assure you of one thing, though: Kodak will act responsibly and we will continue to work with the community and with the government agencies.

We have demonstrated this commitment through a number of actions, and will continue to take additional steps to achieve meaningful solutions. We are committed to appropriate corrective action.

We are spending, as you heard before from the county people, $100 million to upgrade and replace or eliminate chemical storage tanks.

Senator MOYNIHAN. Your tank farm.

Dr. SUTTON. We are reducing our chemical inventories, we are training our people well, we are reducing our emission levels, and we have established a unique program to stabilize neighborhood property values.

Senator, as one of New York's largest manufacturers, and the world's largest manufacturer of film products, we are very conscious of the important role that chemicals play in our society and of our duty to handle them in an environmentally responsible manner, and we are constantly striving to improve.

On the environmental front, we admit that there have been problems, but we are working toward solutions. We are trying to conduct tests both quickly and accurately, and we stand ready to take the corrective actions that may be needed.

We continue to believe, as I said before, and fervently hope that there is no health risk as a result of the low levels of contaminants found in the bedrock.

We are working cooperatively with the state agencies and with our neighbors, and we are initiating major steps to improve our own environmental controls and to bring stability to the neighborhood.

We have been a part of this community for 100 years. We have built a solid reputation as a responsible corporate citizen. We are committed to this community. We want it to become an even better place to live and to work and to raise a family.

I would just like to—you might be interested, if you would permit me to follow up on one remark that Commissioner Jorling made, he mentioned a scientific advisory panel, and I thought you might be interested to know that this was rather a unique set of circumstances.

When we were consulting with Doctor Axelrod, the State Department of Health Commissioner, about the permit for building the

new film sensitizing operation and roll coating operation, it was apparent that the standards for safe exposure to methylene chloride in ambient air were not clearly established, and he suggested that it would be a good idea if a scientific panel were appointed to look into the health hazards of methylene chloride to review the world's toxicology data, to review the data on epidemiology of exposed employees that Kodak had developed, and to come up with that recommendation and evaluation of methylene chloride.

Dr. Bell, in association with the staff at the Department of Health, selected 16 imminent academic scientists from around the county who met for approximately two days, examined all of the data, and came up with a report which, as Commissioner Jorling said, was helpful to them in establishing the air guide that you heard about earlier.

Senator MOYNIHAN. I'd like to get that report, Doctor Bell, would you send me a copy?

What did they find? What was the state-of-the-art internationally on the subject?

Dr. BELL. Good morning, Senator.

The science advisory panel found four conclusions. The first conclusion was that methylene chloride is not a genetic toxicant from mammalian cells in vivo—in life. That means that many scientists believe that for some types of cancer there is a genetic relationship. The finding here by the panel was that, in vivo, methylene chloride was not a genetic toxicant for the mammalian cells in the animals tested.

They also found that methylene chloride has been demonstrated to be carcinogenic in animals, but that did not apply for humans occupationally exposed, and that was based on the fact that the tumors in the animals that were tested by the National Toxicology program and in other bioassays—let me stay with the National Toxicology program bioassay. Those tumors were increased in the spontaneous tumors that normally occurred in those animals.

And then, looking at metabolic pathways and making determinations from the data and the literature, they concluded—and also, in reviewing the epidemiology—that methylene chloride then had not been demonstrated to be carcinogenic for humans occupationally exposed.

They concluded that the increase in incidence of the spontaneously occurring tumors in mice and rats on exposure to methylene chloride had little relevance to the induction of tumors in man.

And then, finally, that the non-carcinogenic toxicity in man is not associated with low levels of exposure.

A final word here that they went on to say is that they were comfortable with a virtually safe dose per cancer risk in the range of 0.2 to 0.5 parts per million, which is 200 to 500 parts per billion, which is considerably above the Air Guide I level that has been alluded to here today.

Senator MOYNIHAN. The Air Guide I for New York?

Dr. BELL. Yes, sir.

Senator MOYNIHAN. I have one more question in that regard. How much did you find that you were just relying on United States sources? Are the British, French, German, or Japanese any help to us in these matters?

Dr. BELL. Yes. The studies throughout the world have helped us, and there have been studies done in Europe, studies done by ICI——

Senator MOYNIHAN. It's about time we got some international standards, don't you think?

Dr. BELL. Methylene chloride is a solvent that is used very widely throughout the world.

Senator MOYNIHAN. Well, as you know, the EPA science advisory board is a little bit less sanguine than perhaps your science advisory board. Mr. Kienitz tells me that the EPA science advisory board lists methylene chloride as a "possible human carcinogen."

Why don't you look into that and let me know what you think?

Dr. BELL. May I comment a moment on that?

Senator MOYNIHAN. Please do.

Dr. BELL. The EPA guidelines stipulate a set pattern for classifying carcinogens according to a scheme, and the evaluation was one that put it into the category that you just described.

Senator MOYNIHAN. Possible?

Dr. BELL. Possible. Investigations are ongoing, and I'm sure there will be other science advisory panels, and hopefully more work, on the metabolism of methylene chloride. I think, as time goes on, the data will lead us to the appropriate conclusion.

Senator MOYNIHAN. That's a perfectly respectable, responsible remark. But do take a look at that. There is obviously some discordance between the two panels, and I'd like to hear more about that.

Dr. SUTTON. I finished my remarks, so we're open to your questions.

Senator MOYNIHAN. Doctor Sutton, I'm sorry we just wandered away from you there.

I would say that's an interesting statement in terms of what Commissioner Jorling remarked about getting a more chemically tight society, that Mr. Grose is going to be reducing the volume of chemicals stored at Kodak Park by 40 percent by 1991?

Mr. GROSE. Yes, sir. Senator, as was mentioned by the county representatives, we have a program that we have been working with the Department of Environmental Conservation on and have received approval for spending, within our company, $100 million, which is aimed towards upgrading and, in some cases, replacing or eliminating our storage tanks at the Kodak Park site.

This is an ambitious program. We will be spending that money over the next five years, we believe, and we have a team of people that has been assigned to that—people from the Department of Environmental Conservation, outside consulting firm, and Kodak—which is active on that effort right now.

Senator MOYNIHAN. Thank you.

Doctor, that comes under the question of inventory control, and I guess it is possible to tighten up those things as a management device.

Mr. GROSS. Of course, our first step is to see where possible we can eliminate the need to store materials, and we believe that we can reduce the inventory by about 40 percent, and we're committed to do that.

Senator MOYNIHAN. In the end, good engineering and management may be one of our major components, as they say in epidemiology, of getting this whole situation done. We're learning, and we're responding.

I'd like to thank you very much.

I'm sorry, Mr. Dyke, I can't take all those little pieces of paper, but if you'd collect one no more than a quarter inch thick it will get into our record.

Thank you very much, gentlemen. You've been very helpful and hopeful.

We will now have a very brief statement—I'm sorry it has to be brief—from representatives of the Xerox Corporation. Mr. Richard Paul is Vice President and General Counsel of Xerox. And I believe he will have Mr. James MacKenzie with him, who is the Corporate Director of Environmental Health and Safety.

I have your statement and it will be put into the record. Please summarize it for us.

STATEMENT OF RICHARD S. PAUL, VICE PRESIDENT AND GENERAL COUNSEL, XEROX ACCOMPANIED BY: JAMES C. MacKENZIE, DIRECTOR OF ENVIRONMENTAL HEALTH AND SAFETY, XEROX

Mr. PAUL. Thank you, Senator. We will summarize.

There are really two points that we would like to make this morning. We'd like to clear up what we think are some misunderstandings of our legal arrangements involving these two lawsuits that were talked about. And then Mr. MacKenzie will summarize very briefly what we think the facts are surrounding the Salt Road incident.

It is true that we had two lawsuits filed against us by two families who lived across Salt Road from our plant. They were the DelMonte family and the Statskey families. It is also true that the parties and their lawyers agreed to keep the terms and conditions of these settlements, which we did complete with them, confidential.

This means, for example, that the parties cannot divulge the amount of money that Xerox paid to settle the lawsuits; however, there is nothing in those settlement agreements that prevents the adult members of the Statskey and DelMonte families from sharing their medical records with the public if they choose to do so.

Senator MOYNIHAN. I think—stop right there. That's what we've been talking about.

Mr. PAUL. Yes.

Senator MOYNIHAN. There is nothing in the agreement—this is the first time we have heard this—that would prevent the adult parties involved, the complaining parties, from making their medical histories available?

Mr. PAUL. That's correct, Senator. Let me be a little more precise. There were eight plaintiffs in these lawsuits—six adults and two children—you and I are now talking about the six adults.

Senator MOYNIHAN. We're talking about the adults.

Mr. PAUL. And I agree with your summary of my statement. With respect to the two children, the matter is somewhat more complicated.

Senator MOYNIHAN. That addresses the question of minority status.

Mr. PAUL. But I would like to address this: it was with respect to the two children that there is a sealed court file. The documents that were filed in the Statskey lawsuit are not sealed and they are available for public inspection. There are not many of them in that file because the lawsuit was settled very early. Other documents generated in that case the Statskeys are free to make available if they have them in their possession.

In the DelMonte family there were two minor children. The court, under New York law, had to approve the settlements that were agreed to for the children, and a court record was created in connection with that process, and it was later sealed by the court.

Now, it is our view that we did ask for the sealing of that file, but it is our view that, in ordering that, the judge has to consider the conflicting goals of protecting minors from public scrutiny and public access to data, and apparently the judge, in that case, ruled that he would prefer to protect the files from public scrutiny.

Despite that, we have stated publicly on Friday, despite that, if this committee or a legitimate public health authority, such as those that testified here today, were to move the court to unseal the file, we would support that motion, precedent or no precedent.

Senator MOYNIHAN. You would support the motion if, for example, Commissioner Jorling, the head of the Department of Environmental Conservation, asked the court to unseal it?

Mr. PAUL. We would. The families will, of course, have to be heard on that issue, as well.

Senator MOYNIHAN. Of course. I don't know what more we could ask of you in that regard.

Mr. PAUL. There is one other thing that I would like to clear up, and that just comes from reading this morning's newspaper.

The plaintiff's lawyer is apparently of the view that the settlement agreements do not permit the adults to discuss their medical records. I'd like to make two comments: first, I don't agree with him; secondly, we are the only party who could complain about their doing so, and we're not going to.

Senator MOYNIHAN. You just said you're not complaining?

Mr. PAUL. Yes.

Senator MOYNIHAN. You will not complain?

Mr. PAUL. That's correct.

Senator MOYNIHAN. I think, if for no other reason, in our hearing this morning we have learned a great many things, but we have cleared up something here that is quite important. You understand, obviously, that from a public health point of view these are things that people probably need to know, but certainly will wish to know if they are told they can't.

Mr. PAUL. That's right. I think they will be a little disappointed when they do see them, but that's okay.

Senator MOYNIHAN. That's all right, too.

Mr. PAUL. If the Senator has time, Mr. MacKenzie could briefly summarize our situation at Salt Road.

Senator MOYNIHAN. Please do.

Mr. MACKENZIE. First, let me say Xerox Corporation is committed to the environmental health and safety of its employees, cus-

tomers, neighbors, and the environment. This policy is applied world-wide on an aggressive basis. It means being completely open and cooperative with relevant regulatory authorities and in compliance with all legal requirements. We have followed this policy to the letter in Webster and elsewhere.

In mid 1984, it was determined that both toluene and trichloroethylene had apparently leaked or overflowed from underground tanks into the soil of the courtyard of building 224. Soil was removed and transferred to a New York State approved class A landfill.

As part of Xerox' world-wide program to remove underground tanks, the vessels were replaced above ground in concrete vaults, making sure any future leak would be contained. The problem was considered corrected.

During November of that year, while installing footing for a building expansion in the courtyard, a colored groundwater was encountered, indicating the earlier leaks had not been fully remediated.

Previous hydrogeologic work had indicated the groundwater on the site flowed north by northwest. Data became available in March of 1985 that showed the water was contaminated with trichloroethylene, 1,2 dichloroethylene, and toluene, and extended to the north by northwest as expected, but additional wells were required to determine the boundaries of the plume of contamination.

The National Response Center was notified on March 18, 1985. As additional test wells were drilled, data indicated that the contaminated groundwater was moving in a southerly and easterly direction, as well.

On August 8, 1985, to our surprise, a well on the Salt Road boundary indicated that contamination had likely left Xerox property in an easterly direction.

I might say parenthetically that it was later determined this unexpected flow was caused by an underground bedrock which split the flow and sent it in two directions, rather than the usual flow of north by northwest.

Xerox took the following actions very quickly: on August 8 we notified our Salt Road neighbors immediately. We determined that only one Salt Road neighbor, the DelMontes, used a well for drinking water. We immediately supplied the DelMontes with bottled water.

We notified the Town of Webster and the New York State Department of Environmental Conservation and the Monroe County Department of Health.

On August 9th we met with the town, the state, and the county to apprise them in detail, as Doctor Merkins mentioned earlier.

Senator MOYNIHAN. Mr. MacKenzie, unfortunately we are running out of time. I want to put that statement in the record, but let me just be clear in that regard, because it does seem to be responsible corporate citizenship. You found the plume moving in the direction of a family's drinking water when?

Mr. MACKENZIE. On August 8.

Senator MOYNIHAN. And when did you notify the family?

Mr. MACKENZIE. On August 9.

Senator MOYNIHAN. The next day?

Mr. MACKENZIE. Sorry. We notified them on the 8th. We met with them the next day.

Senator MOYNIHAN. So you found out, and in the space of 24 hours you told them?

Mr. MACKENZIE. Told everybody everything.

Senator MOYNIHAN. That seems to be very straightforward. I think this other matter may be cleared up. I hope it is. We have to be careful, but you obviously were. I don't know what is in those medical records, but I hope that resolves the question, too.

I want to thank you very much. It is a record of response. I don't think you could ask anything more. I appreciate you both coming. Mr. Paul, I particularly appreciate your responding to obviously the public questions. You didn't sit there and play "no comment," but you came forward. We appreciate that.

Mr. PAUL. Thank you, Senator.

Mr. MACKENZIE. Thank you.

Senator MOYNIHAN. I am sorry. As you know, we are dealing with the problem of the weather in Albany, and that has put us behind. But now we are going to hear from Mr. Romolo Celli of the Maplewood Neighborhood Association and Mr. James Cloonan of the Koda Vista Neighborhood Association.

Gentlemen, we welcome you here today.

Mr. Celli, you are first.

STATEMENT OF MR. ROMOLO CELLI, MAPLEWOOD NEIGHBORHOOD ASSOCIATION

Mr. CELLI. Thank you for meeting with us this morning, Senator.

My name is Romolo Celli. I am the president of the Maplewood Neighborhood Association. The MNA, as it is often referred to, was formed over 20 years ago. It is an all-volunteer organization.

I have a brief statement that I am going to read verbatim.

Senator MOYNIHAN. If you like, we'll put it in the record verbatim, and you might want to summarize it. But do what you wish.

Mr. CELLI. It's very short.

I'm quite sure de Tocqueville did not intend to include the chemical contamination of our environment when he said "the health of a democratic society may be measured by the quality of functions performed by private citizens."

Senator MOYNIHAN. Very elegant.

Mr. CELLI. The future economic, political, and physical health of our community may, indeed, some day be measured by the quality and quantity of functions performed by private citizens. The issue of chemical contamination that confronts the Maplewood neighborhood, the Koda Vista neighborhood, the towns of Webster, Ontario, and the village of Brockport, as well as numerous other sites around the state, cannot be solved with ledger sheets, calculators, and test tubes alone. The process is best served by the ongoing involvement of private citizens.

The Maplewood Neighborhood Association was founded on the principle of community empowerment. We empower people every day in issues such as zoning disputes and capital improvement plans. It has been our experience that community participation is the most effective way to maintain a rational public atmosphere,

especially in times of great emotional turmoil. We are always careful to make timely, complete, and non-technical reports to the community.

The Maplewood Neighborhood Association's inclusion empowers the community in such a way as to dispel the feeling that "big government" and "bit business" don't care about people.

At the request of the three community groups, Concerned Neighbors of Kodak Park, Koda Vista, and Maplewood, the Eastman Kodak Company generously funded the services of a professional consultant for the exclusive use of the citizens. It is with the help of this consultant that we have a meaningful impact on the technical discussions surrounding the study of chemical contamination in and around Kodak Park.

We have successfully and cooperatively worked with Kodak on a number of issues, including the expansion of their film base production facilities at building number 53 located in Maplewood. We have proven that the community groups stand in favor of maintaining the economic viability of the Eastman Kodak Company in Rochester.

We are not requesting that the federal government take a more direct role at this time, although we could use some help with the dissemination of information locally. The State of New York has recently pulled many of their community relations people out, leaving a communications vacuum. Instead, we are requesting that you speak out on behalf of the citizens for their continued inclusion in this process. We need your help to reinforce the importance of community involvement in this critical issue.

The 1990s and beyond must be an era of environmental responsibility, so let's draw the line right here—in the great city of Rochester, New York—and right now—in 1989. The community must be involved in this process, not as an adversary, and not necessarily as a watchdog ready to strike, but as a partner striving to combine productivity and profits with environmental responsibility.

Senator MOYNIHAN. That was a very succinct statement, as you said.

I suspect that when de Tocqueville made that remark about the health of a democratic society being measured by the quality of the functions performed by the private citizens he probably wrote that about 40 miles from here. As you know, he came over to visit Auburn Prison and made his way along the Erie.

I want to get back to your question about help with the dissemination of information locally, but let's first hear from Mr. Cloonan.

STATEMENT OF JAMES CLOONAN, KODA-VISTA NEIGHBORHOOD ASSOCIATION

Mr. CLOONAN. I don't have Romolo's literary eloquence. I'd have to quote Mickey Spillane or Doonesbury to make my point.

Senator MOYNIHAN. Doonesbury, if it is all right. This is a public hearing.

Mr. CLOONAN. Senator, we appreciate your presence here, and I have been very gratified to hear your request to previous speakers who represent government and industry for additional information

and for ongoing input. It is most gratifying to know this is not just a token visit. You are concerned about——

Senator MOYNIHAN. We have to legislate this year.

Mr. CLOONAN. The thing is that I represent the Koda Vista Community Association of Greece. I'm also a member of the Kodak Park Technical Team, which you heard referred to previously. This is with the state and county health agencies, etc. Also, I am a member of Doctor Karen Bell's Health Assessment Committee.

The Koda Vista Association represents an area of about 265 homes and 1 junior high school spread over 10 streets and lying alongside a portion of Kodak Park recently registered as an inactive hazardous waste site, class 2.

After a year of exposure to potential contamination of KPM, we, the residents of Koda Vista, are still awaiting testing in our neighborhood.

It is essential that chemicals in our area be identified, quantified, and the health risks be assessed quickly. Because of these concerns, our real estate values are in limbo, also.

It is difficult to counsel our residents in the neighborhood to maintain a trusting, open-minded attitude beneath the sword of damocles—got you Romolo.

Kodak's original spill reports escalate with time. This is a company who values their good will and integrity—and you have heard from previous speakers all the generous things that they have done for the community presently and over the years.

Senator MOYNIHAN. Yes.

Mr. CLOONAN. But with each spill release we wait for the other shoe to drop. Sometimes an initial spill escalates to a much larger amount, and this is what we sometimes refer to as the "other shoe syndrome."

Again, in this area of trust and credibility and open-mindedness, the health department has problems—I mean this state-wide, as well as local. They occasionally get burned by flawed testing and inadequate data. The DEC has been decimated by staff reductions. They have lost an attorney, a geologist, secretary, a citizen participation specialist in Albany, and its local counterpart, despite a declared effort to improve communications via an expanded citizen participation program.

The disappearing staff reminds me of one of Agatha Christy's novels, "And Then There Were None."

We have been told the DEC wants to keep us informed and involved and to let them know of any problems or concerns.

I sent a letter to Commissioner Jorling on January 26, 1989, which was hand-carried to Albany by a deputy commissioner. I'm still waiting for an answer.

I guess the Governor's budgetary crisis extends to the DEC stationery and postage department.

Senator MOYNIHAN. Could I just interrupt a second? Surely there is someone here from the DEC in the audience?

[Two men stand.]

Senator MOYNIHAN. Those two gentlemen are going to get your letter answered.

Stand up and tell us your names.

Mr. MARRIOTT. I am Thomas L. Marriott, and this is Frank E. Shattuck.

I think that letter is close to being responded to.

Senator MOYNIHAN. Good.

Mr. CLOONAN. Senator, in all fairness, don't single out those two gentlemen. They are from the local area; they are not the ones to whom the letter was sent.

Senator MOYNIHAN. You'd be surprised. No, I'm just sort of saying that they're going to see that your letter is answered, and they said they would.

Mr. CLOONAN. Okay.

In regard to this counterpart of the disappearing people, the DEC response to my letter has been acknowledged.

Now, testing delays have been caused by depleting staffs, technical problems—for example, detection limits, sampling techniques, maximum sampling and analytical capacity. These things ping pong back and forth between Kodak and the agencies, but they are always resolved as the pressures increase. But they have left us residents no nearer to a solution then when we started.

There is a popular slogan which we see on many police cars through the state today. It says "Serve and protect." That's what we ask from our elected officials, be they local, state, or national, and the agencies which they direct. Serve the citizens to identify and remediate quickly the ever-increasing contamination and pollution that threatens our society. And protect us from things that go bump—not in the night, but 24 hours a day.

It can be a very lonely and sometimes frightening experience to be a citizen today. Show us we are not alone.

Thank you.

Senator MOYNIHAN. Thank you, Mr. Cloonan. And you're not alone.

[Applause.]

Senator MOYNIHAN. The demonstrations in this courtroom are welcomed.

You aren't alone, and you shouldn't feel alone. It is our task to make certain of that.

I would have thought that there was a fairly high order of openness and forthcoming qualities in the testimony we've taken from the county, from State officials, and from the corporations involved. Would you agree?

Mr. CELLI. I would agree, Senator.

Senator MOYNIHAN. You would agree.

Mr. CLOONAN. I would agree, with one caveat.

Senator MOYNIHAN. Of course. You're entitled to one caveat.

Mr. CLOONAN. People in the public eye who have a degree of authority over the citizenry, when they speak about things that are good and beneficial they usually speak in the future tense. It is always "This will be done," "That will be done," etc., which is great, but we are living in the present tense.

I think it was alluded to by a previous speaker about chemicals. Some chemicals are hazardous, some are not. But let's face it: the citizenry are a mass trying to learn. They have to be educated. It doesn't take much to know that sodium and chioride separately are very deadly chemicals, but put them together and they are great

on a radish. The last thing that was mentioned, too, about testing in Koda Vista, there has been no testing, per se. They alluded to the fence line wells. They have not been tested since August of last year. Kodak has made a promise to begin testing again, but this area, Koda Vista, has not been tested at all, and that is a concern which I am voicing right now.

Senator MOYNIHAN. I think the Kodak officials behind you are listening.

Mr. CLOONAN. I know they're behind me. Do you mean literally or figuratively?

Senator MOYNIHAN. I want to ask Mr. Celli: you said you would look to the Senate or the committee for help with the dissemination of information locally. Would you help me a little more in terms of spelling that out?

Mr. CELLI. The Maplewood Neighborhood Association has annual dues of $5 per family. It becomes very difficult for us to disseminate information the way we would like to. We had hoped that we would get help from the State of New York, and we will continue to try to get help from the State. I don't think I'm specifically requesting help from the Senate for a few extra thousand dollars for funding a newsletter, but that's the direction we'd like to see taken in the State.

Senator MOYNIHAN. And it seems to me a very reasonable request.

I do have to say I'm sorry that we are about 15 minutes overtime now, and there is only one plane a week that leaves Rochester for Washington, D.C., since we improved the system. As I say, when we start legislating, pay attention, because things aren't necessarily going to get better.

But I think our committee will find extremely useful some of the things we've heard this morning, and not the least the fact that neighborhood associations are truly involved and clearly involved. Neither of you are being paid to be here, and yet you are, and everybody else was.

Mr. CELLI. I want to make one final point. There was a group that was not heard from today—Concerned Neighbors of Kodak Park—that has played a very important role in this process.

Senator MOYNIHAN. If there is any group that would like to have a statement included in our record, we will leave the record open for two weeks.

Mr. CELLI. I would encourage that and hope that they would do that.

Senator MOYNIHAN. They can just write to the Committee on Environment and Public Works, United States Senate, and address it to me so we'll know what we're talking about. That goes to any group or individual. There is a limit on length, simply because we have a printing budget, too, as you do in Maplewood. But we'd be happy to make sure that the statements are included.

With that, and apologizing for having to run out the door, I

thank you, Mr. Celli, and I thank you, Mr. Cloonan, and I thank our audience, which has been very patient throughout.

We will call the hearing concluded.

[Whereupon, at 11:45 a.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

[Statements submitted for the record follow:]

MONROE COUNTY HEALTH DEPARTMENT

Testimony of Dr. Karen M. Bell, M.D.
Deputy Health Director

Eastman Kodak

I am Dr. Karen M. Bell, Deputy Health Director for Monroe County and responsible for the disease control activities of the Health Department. I very appreciate the opportunity to share with you the processes and plans of the Health Assessments Studies Committee with respect to Kodak Park. The committee consists of members from various groups, and each group has specific tasks. These groups in their respective roles include:

1. The New York State Health Department. Dr. James Melius is the lead figure for this agency and in addition to the efforts he has already described, will provide:

   A. A model by which the population with the greatest exposure to Kodak air emissions can be defined.

   B. An instrument which can be used to conduct a symptom prevalance survey in this defined population as well as in a control population.

   C. Personnel to conduct the survey.

   D. Data analysis.

   E. Expertise and support in the development of other studies deemed necessary.

2. Citizens from the various neighborhood communities have several roles:

   A. Liaison between the health assessment process and the community-at-large. As such, the citizens on the central committee will help to communicate to the citizenry-at-large the rationale for the health assessment studies, what they hope to achieve, their limitations, and interpretations of results.

   B. Encouragement and support for the study process in the community to ensure maximum participation.

   C. Review of study designs and analyses with technical support from consulting staff.

   D. Input with respect to specific issues and problems which appear to be prevalent in the community.

3. Consultants. These include three M.D./M.P.H. physicians with specialty training in toxicology and risk assessment and one P.H.D. whose background is in the development and analysis of environmental epidemiological studies.

The consultants will review all study designs, protocols, methods, and analyses for all aspects of each study and submit comments to other committee members.

4. The Monroe County Health Department plays the role of project coordinator as well as maintaining involvement in the review processes described above.

At the present time, a number of health assessment studies are being developed which fall into the three classic categorical approaches to the epidemiology of environmental health.

A. Case control studies. These studies compare cases of a specific disease or outcome to a group of controls without the disease or outcome with respect to exposure to a particular risk factor or factors. Case control studies now in progress with respect to Kodak include: 1) Low birthweight: Is residence near Kodak a risk factor? (MCHD); 2) Cancer of the brain, pancreas, and liver: Is residence near Kodak a risk factor? (NYSDH). These studies are dependent on birth certificate and Cancer Registry data already on file and do not require interaction with the community until completed.

B. Symptom prevalence studies are designed to determine if specific symptoms or outcomes and appear more frequently in a cross section of a well defined exposed population versus a comparison (control) population. Such a study is now being developed and will be conducted in the population with the greatest documented exposure to air emissions from Kodak.

C. Cohort studies define a specific well defined population with a particular exposure as well as a comparison group which is not exposed to the risk factor. Both groups are then followed prospectively over long periods of time to ascertain rates of specific outcomes in each.

At the present time, we are awaiting the results of the environmental studies now in progress which should provide information on the types of chemicals to which a specific and well defined population may have been exposed. Should such a population be defined, a cohort study will be recommended and designed to address long term follow-up of these persons.

Thank you for the opportunity to present these efforts to you today. I shall be happy to address any question that you may have at this time.

KMB:bh
3/21/89

MONROE COUNTY DEPARTMENT OF HEALTH

Investigation of Groundwater Contamination
Xerox Facilities, Webster, New York
1985-1986

Testimony to Senator Daniel Patrick Moynihan
Tuesday, March 21, 1989

An article in the Washington Post of Monday, March 13, 1989, and a flurry of follow-up articles in the local media have reopened public concern about a previously well described and investigated leak of an organic solvent from a waste storage system at the Xerox facilities, near Salt Road, in the Town of Webster, Monroe County. The Washington Post article highlighted a "covenant of silence" which out-of-court settlements in such situations frequently impose. The free flow of information which facilitates immediate and comprehensive public health response is diminished if not obstructed. The wording of the article, unfortunately, raised the possibility that "plant discharges," including air as well the groundwater contamination, were the link to neurologic symptoms and cancer cases. It is possible that the public is now concerned about the adequacy of the public health investigation. Let me assure you, our constituents on Salt Road, and other residents in the Town of Webster that the full extent of risk from contamination and resulting human symptoms have been determined and no further investigation is indicated.

Let me take this opportunity to briefly review investigation, abatement, and legal redress as it occurred four years ago. The Monroe County Health Department was informed by the Xerox Corporation of possible contamination of groundwater by trichloroethylene on August 8, 1985. We were informed at the same time that citizens on Salt Road and other public agencies were informed. The response of the Monroe County Health Department was immediate and comprehensive.

On the first day, the Poison Control Program of Lifeline informed us of a call placed to them by one of the families on Salt Road (#676) reporting some minor symptoms. I personally talked with the family, and immediately referred them for medical evaluation by on occupational health specialist. This reccmmendation, along with a personal visit to the home and numerous phone calls, was made prior to the commencement of a program of well water testing. As their medical evaluation commenced, and as they sought legal counsel, we lost contact with the family. It is my understanding that the family was relocated by Xerox shortly thereafter.

Well water sampling was carried out by a certified private laboratory, General Testing Corporation. Paired samples were also tested at the Wadsworth Laboratory, New York State Department of Health. Both confirmed the presence of trichloroethelene in the well at 676 Salt Road. Samples obtained from neighbors on both sides, that is at 660, 702, and 755 Salt Road, did not reveal contamination with TCE or other organic substances.

Let me outline the scope of the investigation and legal action taken. Between early August 1985, and May 1986, countless meetings

were held, and enumerable consultations sought. The Monroe County Health Department played the lead role for the purpose of assuring coordination and efficiency. Major meetings included representation from the New York State Department of Health; Department of Environmental Conservation Avon Regional Office, as well as the Enforcement Section from Albany; the Town and Village of Webster; and the Xerox Corporation. Additional evaluations were provided by the Landfill Review Committee (LRC) of Monroe County. Professional consultations were sought from the Environmental Health Advisory Committee, Monroe County Board of Health; Monroe County Agriculture Cooperative Extension Services; Cornell University; and SUNY Geneseo. Unrelated ongoing investigations and monitoring programs were reviewed to rule out any possible interplay between other events and leakage from the storage system on Xerox property. These included reviewing air emissions records of previous spills and leaks at the Webster complex, and the New York State Inactive Hazardous Waste site located on Xerox property approximately a half mile northwest of the spill site. Under the supervision of the Department of Environmental Conservation, the size and shape of the plume was well outlined through the well water sampling program and through a series of testing of wells in the pasture behind the houses on Salt Road. Abatement through the process called stripping was instituted.

The investigation took so long and was so thorough because of a coincidental, and in the end, unrelated finding. Because the TCE plume apparently spread directly east instead of to the northwest as per the direction of land slope, the possibility of unexpected spread of a plume from a different source was considered. Because arsenic was one of the indicator substances in the hazardous waste site a half mile away, well water samples were tested for the presence of arsenic. Samples were obtained from an ever-expanding circumference. Eventually a modified program of stratified random sampling was carried out and a total of 197 private wells were sampled. Most of the samples contained arsenic in the range of 15 to 25 parts per billion (ppb); two head levels slightly above U.S.E.P.A. drinking water standards of 50 ppb. An extensive many-months investigation revealed that arsenic is present in essentially all geologic formations throughout areas of northern Monroe County which were tested, in groundwater, soil, and rock samples. Arsenic compounds were used as pesticides and insecticides in previous decades, up through the 1940's and forms of this substance persist in the surface soil. Pyrite, naturally occurring in shale north of the Ridge, contains stable forms of arsenic. Any landfill site or other source on Xerox property is not the source of contamination noted five or more miles away.

One of the ironies of this entire investigation is that the public water supply available to citizens in that region, from the Village of Webster, is a deep wells system, ten miles away and 300 feet below the surface. Residents in the semi rural neighborhood had preferred their own otherwise free water supply. Our final recommendation was the quality of groundwater in the area cannot be assured and that the public water supply should be used. Xerox Corporation financed the approximately $2,000 per household cost of connecting a number of

houses around their property to the available water main. In addition, Xerox Corporation expedited the approval, provided the engineering, and paid for the installation of a water main on a 4,300 foot section of Phillips Road on the west side of their property, so as to assure access to the public water supply to all residents. Xerox was most responsive to our recommendations, and foot the bill of over $250,000, before the final investigations were completed.

A comprehensive investigation was carried out over a ten-month period. Unfortunately, one family's drinking water well had already been contaminated and they apparently suffered medical consequences. They have received redress through the legal system.

Let me set the record straight. The case of cancer in an adjacent home did not occur until after this investigation was completed, and remediation, abatement, and legal penalties against the Xerox Corporation were commenced. Unfortunately, any exposure had already occurred prior to these investigations. Residents of Salt Road may be reassured by the information that a review of the Tumor Registry of Monroe County in January 1988 and again within the last week reveals only a single case of lung cancer in a smoker in the preceding ten years on that stretch of Salt Road.

The recent article in the Washington Post did not highlight any new findings or suggest insufficient investigation. It merely cited the example of this unfortunate event to demonstrate the legal quirk of sealed out-of-court legal redress agreements. The investigation of contamination of groundwater in the Town of Webster, after the finding of a leaking waste solvent handling system, was completed in 1986 and all appropriate reaction has occurred. The extent of the contamination has been well outlined, and remediation and abatement are in process. Legal proceedings against the corporation responsible for these industrial accidents have been carried out. Exposed citizens who suffered illness have sought and received legal redress. The Monroe County Health Department will be consulting with the County Attorney to see whether there is any recourse to review the proceedings of the out-of-court settlement.

Mark J. Merkens, M.D.
Deputy Health Director

MJM:bh

TESTIMONY OF

James M. Melius, M.D., Dr.PH

New York State Department of Health

March 21, 1989

Hearing of the

Senate Committee on Environment and
Public Works

Subcommittee on Environmental Protection

I am Dr. James Melius, Director of the Division of Occupational Health and Environmental Epidemiology for the New York State Department of Health. I am representing Dr. David Axelrod, the Commissioner, who was unable to attend this hearing due to a previous commitment. We thank you for the opportunity to discuss these environmental health issues with you today.

My testimony will focus on environmental health issues near two major industrial sites in the Rochester area, Xerox and Kodak.

Xerox Corporation

In 1985, the New York State Department of Health first became aware of possible groundwater contamination at the Salt Road Complex of Xerox. Working with DEC and the Monroe County Department of Health, the Department of Health analyzed water samples taken from seventeen private wells located near the site and a surface water sample taken from a nearby pond used to water beef cattle. This sampling was prompted by groundwater monitoring conducted by Xerox on their own property which showed the presence of solvents (from two leaking storage tanks) near the boundary of the property.

The Department of Health sampling showed contamination of the private well at one residence in the area (trichloroethene - 360 micrograms/l and trans-1,2-dichloroethene - 180 micrograms/l). It is our understanding that all residences in the area were then connected to the public water supply. More recently, the Department of Health has sampled basement sump water from two nearby residences to determine if contaminants could be entering the basements due to the high water table in the area. No contaminants were found.

Kodak Corporation

The situation at Kodak is more complex. Kodak Park, which contains Kodak's major manufacturing and research facilities in Rochester, is located within the city boundaries and is surrounded by residential areas. The large size of this facility and its proximity to residential neighborhoods contribute to the complexity of possible environmental health problems from this facility. During the past year, the New York State Department of Health has been involved in several environmental health issues related to Kodak. I will briefly outline our involvement:

Rand Street

Last year, Kodak reported that monitoring wells installed to monitor contamination from the Building 115 Tank Farm showed the presence of various organic chemicals (including methylene chloride) under the adjacent parking lot near the fenceline with the Rand Street neighborhood. This report lead to a series of investigations to further evaluate the extent of the contamination and the possible effect of this contamination on the health of the residents living in this area. The Department of Health has worked closely with DEC and the Monroe County Department of Health on this evaluation.

To assess the potential for contaminated groundwater or associated vapors to enter homes through the basements, Kodak has developed plans (for approval by the involved governmental agencies) for the evaluation of the level of contaminants in soil vapors in the area of the parking lot and in the Rand Street neighborhood and for on-site and off-site hydrogeological surveys. Kodak has also evaluated sewer vapors and the integrity of the basements in the neighborhood.

Based on the recently obtained data from the basement integrity survey the testing of sewer and soil vapors, and groundwater data, we have determined that the available data may indicate the presence of a plume of chemical vapor along the north side of Rand Street. While further groundwater monitoring could confirm or refute the presence of such a plume, we believe that the residents' concerns would be more adequately addressed by indoor air monitoring. Therefore, the health agencies have advised DEC that Kodak should offer

homeowners along the northside of Rand Street the opportunity to have their indoor air sampled for the presence of certain chemical contaminants. The protocol and priorities for this indoor sampling effort are currently being worked on.

Although this investigation of possible effects on the Rand Street neighborhood has had a number of technical difficulties, we believe that the current approach will allow for an orderly and comprehensive assessment of possible environmental exposures from this spill.

Draft Environmental Impact Statement

Late last year, the New York State Department of Health reviewed a Draft Environmental Impact Statement (DEIS) submitted to DEC by Kodak as part of Kodak's proposal to add additional capacity to manufacture film in Kodak Park. Our review focused on the health risk assessment aspects of the DEIS (attached) . The basis for our review included our own scientific assessment of the health data available for methylene chloride. We also used information from EPA's Scientific Advisory Board's recent review of the toxicity of the chemical as well as information presented by the report of Kodak's Dichloromethane Science Advisory Panel.

Our review raised a number of technical questions about the information included in Kodak's DEIS. In addition, based our own review of the carcinogenic and non-carcinogenic health effects from methylene chloride, we recommended that the average ambient air level of methylene chloride in a residential community not exceed 60 micrograms/cubic meter (17 ppb).

School 41

In late December, a leak in a pipeline carrying solvents to the distilling department in Kodak Park West occurred resulting in the release of several thousand gallons of solvents (primarily methylene chloride) into the soil and railroad bedding. This area is adjacent to a local elementary school (School 41). In February, a series of monitoring wells were installed by Kodak. Analysis of some of the soil samples taken from a well near the school showed elevated levels of organic chemicals. These results raised the possibility that vapors from this contaminated groundwater might enter the school building. At the request of the Monroe County Department of Health, the New York State Department of Health conducted indoor air testing in the school.

Initial samples in the school were collected on February 16 with results reported over the weekend. These initial samples were collected from six sites in the school and two outdoors. Samples were also collected from a similar school in another part of Rochester. Each sample was analyzed for the presence of three chemicals associated with the spill, methylene chloride, cyclohexane, and acetone. Results showed the presence of methylene chloride in all of the samples collected for School 41 and in 2 of the 4 samples from the other school. Acetone was also found in some of the samples collected from School 41. The levels of methylene chloride in School 41 ranged from approximately 22 ppb to 49 ppb and were generally higher than the outdoor samples and the samples from the other school. These levels were consistent with previous ambient air measurements and could thus result from Kodak's permitted emissions (rather than the spill).

The levels found were well below levels expected to cause short term health effects. These samples were only collected over a two hour time period and cannot be readily compared to exposure criteria developed for longer term exposure (i.e., average exposure over a year). Therefore, we recommended that further monitoring be conducted to better assess the exposures to methylene chloride at the school taking into account wind direction and other possible sources of exposure. This further more extensive monitoring has just been completed. Initial results from three days of short term samples collected to validate our sampling methodology showed the presence of methylene chloride (and occasionally acetone) in samples collected in the school but at levels generally below those measured earlier. We expect the results from the longer term sampling to be ready shortly.

Kodak Health Studies

In responding to the environmental contamination at Kodak, we recognized that possible health effects would become a serious concern for the residents living near the facility. Initially, we believed that the planning for any health studies should await the results from environmental monitoring of the affected areas. However, with the delays in the environmental evaluations, we decided to initiate the planning for health studies. Working with the Monroe County Department of Health and the City of Rochester, a citizens' advisory committee was formed to help us delineate the types of health studies which should be conducted. This group includes representatives from the potentially affected neighborhoods. The Monroe County Department of Health has held several meeting of this group, and I have also met with them twice. With input from this group, we have also formed a technical advisory group made up of outside technical experts to help formulate plans for health studies and to review study protocols. This technical advisory group has also met with the citizens' advisory group. We believe that the early development of both of these groups will assist us in the development of sound health studies which appropriately address the concerns of the community.

We are now in the process of developing a study of the incidence of cancer around Kodak Park. This proposed study will utilize information from our State Cancer Registry to determine if the incidence of several types of cancer is greater in the areas with higher exposures to methylene chloride emissions from Kodak than in other areas of the city. A computer model used by Kodak to estimate air concentrations in different areas around the facility as well as available monitoring data from Kodak and DEC will be used to select the areas for the study. Other factors affecting cancer incidence such as age, sex, race, and occupational exposures will also be taken into account in this proposed study. We are currently finalizing the protocol for this study for review by the two advisory groups and plan to initiate the study in the next month or two. Meanwhile, we will continue to work with the County Health Department and the advisory groups to determine what other type of health studies should be conducted.

Other Environmental Health Studies

The New York State Department of Health is also conducting a number of other health studies related to environmental contamination. We believe that such studies are important for our ability to appropriately address the impact on public health from different types of environmental contamination and to help develop approaches (both community and personal health) to prevent or ameliorate this impact. It is important to note that health effects may only occur years after initial exposure. Thus, the health risk for exposed populations may continue for years after the environmental problem has been corrected. These continued health risks must not be ignored.

For example, last year we began the development of a health study of residents and former residents of Love Canal. This study will update the information collected in the initial studies in the late 1970's. To initiate this study, we are cataloguing and computerizing information collected by the Department of Health in our earlier studies to develop a registry of people possibly exposed to the environmental contamination at this site. This registry will then provide the basis for a series of health studies of this population. The health studies will look at the incidence of cancer and other illnesses among these exposed residents. While working on the development of the registry and study protocols, we have held a series of meeting with local citizens to discuss the health studies and are currently developing a citizens' advisory group for this effort.

We are also working on a number of other environmental health studies. These include studies of the incidence of birth defects among the children of residents living near hazardous waste sites in the state, a study of levels of PCB's in breast milk of Mohawk Indians living near a contaminated area of the St. Lawrence River,and studies of groups living near several other waste sites. Another study currently being planned would be a registry of citizens exposed to drinking water contaminated from environmental releases. For this study, we will collect groups of residents from a large number of separate incidents across the state. Groups such as the one living near Xerox would be included in this registry

(if available). By collecting these small groups of individuals, we hope to have enough people to conduct meaningful follow-up studies of their health.

We believe that these current and planned studies provide a good basis for starting an assessment of the impact of environmental contamination on the health of New York State citizens. These health studies complement our other extensive efforts to work with DEC and EPA to ensure the appropriate evaluation of all hazardous waste sites and to incorporate potential health impacts from a site into the prioritization and assessment of that site. However, we also realize that much more will need to be done to fully assess the effects of environmental exposures on the health of New York State residents.

I thank you for the opportunity to testify to you today and would be glad to answer any questions.

TESTIMONY OF

WILLIAM L. SUTTON, M.D.

SENIOR VICE PRESIDENT AND DIRECTOR

CORPORATE RELATIONS

EASTMAN KODAK COMPANY

March 21, 1989

Senator, good morning and thank you for inviting us.

Personally, it is a pleasure for me to have yet another opportunity to meet with you. I do hope we can shed some light on the situation here in Rochester and help you in your study of the environmental issues of this community.

It is characteristic, I think, that you have decided to come here yourself, rather than rely on the reports of others.

You already have received a good deal of information from the state and local agencies. We are cooperating with them fully. As you know, we have conducted a number tests and studies. The reports in front of me typify the volume and extent of information generated by this effort. You are welcome to have these studies as part of your record.

I believe you are aware of the recent soil vapor tests conducted on Rand Street and in a comparison area farther from Kodak Park. There is reason for optimism in those test results.

* One, soil vapor at each location was found to contain <u>extremely</u> <u>low</u> levels of chemicals; and

* Two, chemical levels found in the Rand Street area did not differ greatly from those found in the comparison area;

* Three, these data give <u>no</u> indication that solvents detected in the bedrock, 22-to-32 feet below the ground's surface, are moving up through the soil and into the air in the Rand Street area.

We believe these findings, coupled with the favorable results at School 41, Hoover Drive School, and the Monroe County sewer tunnel project -- which now passes beneath Kodak Park -- suggest that the extent of chemical contamination is no where near what some had originally thought.

We, at Kodak, recognize that there are still concerns and that there is still much work to do. Soon indoor air sampling will begin on the north side of Rand Street. And there are other tests to come. But I can assure you this: Kodak will act responsibly, and we will continue to work with the community.

We have demonstrated this commitment through a number of actions, and will continue to take additional steps to achieve meaningful solutions.

* We are committed to appropriate corrective action.

* We are spending $100 million to upgrade, replace or eliminate chemical storage tanks at Kodak Park.

* We are reducing our chemical inventories, strengthening procedures for handling chemicals, and improving training for Kodak employees.

* We are substantially reducing emission levels.

* And we have established a unique program to stabilize neighborhood property values.

As one of New York State's largest manufacturers and as the world's largest manufacturer of photographic film products, we are conscious of the important role chemicals play in our society and of our duty to handle them in an environmentally responsible manner. We are constantly striving to improve.

Kodak has been an integral part of this community for over 100 years, and has built a solid reputation as a good corporate citizen. We are committed to this community, and we want it to become an even better place in which to live, work and raise a family.

On the environmental front, there have been problems. But we are working toward solutions. We are trying to conduct tests both quickly and accurately. We are instituting preventive measures. And we stand ready to take whatever corrective actions may be necessary.

Photography is based on chemistry. Chemicals have been handled at Kodak Park for nearly 100 years. And we have always tried to be cautious.

Despite our best intentions, we have had spills. The DEC, state and federal agencies all know this.

In 1978 we voluntarily began to place groundwater wells at Kodak Park to better understand the hydrogeology of the area.

In preparation for the Monroe County sewer tunnel project, we drilled deeper wells along the proposed route under Kodak Park. We detected solvents in the bedrock and notified the public authorities in January 1987. This also prompted us to expand our evaluation at other Kodak Park areas.

We then found solvents in the bedrock 22-to-32 feet beneath the ground's surface inside our Rand Street fence line. We notified the agencies. Clean-up is already underway. Pumping wells are operating 24 hours a day.

Chemical compounds have also been found at far lower levels inside our fence line near Koda-Vista.

After a year of investigating and testing, we do not have a definitive picture of the extent and location of chemical migration.

What is known is that low levels of certain solvents are located far below the ground's surface. No evidence exists that chemical exposure on Rand Street is any greater than that found in the comparison area selected by government authorities.

There do not appear to be routes of public exposure to chemicals in the groundwater. There are no drinking water wells in any of the areas in question. In fact, there is no scientific evidence that suggests human health is at risk.

Yet, testing continues so as to measure levels more precisely and track the extent of chemical migration.

It will take some time to conduct all of these tests and analyze the results. We wish, like everyone in these neighborhoods that this process could move along more quickly. To ensure accuracy at very low detection levels, tests are being conducted according to strict scientific protocols which have advanced the state-of-the-art in environmental testing. These test procedures are being developed with, approved by and monitored by the New York State Department of Environmental Conservation (DEC) and the Department of Health (DOH). Neighborhood leaders and their own consultant participate in this process.

In the meantime, we continue to review our operations more closely, and are taking tangible corrective actions designed to prevent future incidents.

Chemical Storage Tank Reduction and Improvement

As I alluded to earlier, we have committed $100 million to a Chemical Storage Tank Reduction and Improvement Program. We will examine every chemical storage tank -- over 1,000 -- at Kodak Park. The tanks will be either replaced, upgraded or eliminated. This program will greatly reduce the potential for groundwater contamination at Kodak Park.

We also are investing tens of millions of dollars to improve environmental controls on both equipment and processes.

Complementing this effort, we have instituted an array of actions to reduce chemical inventories at Kodak Park and to strengthen procedures for handling chemicals. Our goal is to eliminate all leaks and spills. We plan to reduce the volume of chemicals stored at Kodak Park by 40 percent before year-end 1991.

Emissions Reduction Program

As you are no doubt aware, Kodak Park's manufacturing operations are subject to numerous regulatory permits. These permits limit the amount of emissions into the environment. Kodak, Senator Moynihan, is aggressively pursuing ways to reduce its emissions still further.

It is in our own interest to be environmentally conscious. For instance, we already recycle 96 percent of methylene chloride, the key solvent in the manufacturing of photographic film. After working closely with government agencies and the community to gain approval for expansion of our film-base making capacity at Kodak Park, we agreed to reduce methylene chloride emissions by an additional 70 percent by year-end 1995. This will bring the recovery and control of methylene chloride in the base-making process to 99.3 percent.

Groundwater Remediation

Groundwater testing is necessary to best assess the course of action Kodak should take. Plans have been submitted for review by the New York State Department of Environmental Conservation.

Pumping wells, located near the Rand Street neighborhood, are currently extracting solvent wastes from underground water. Others will be installed.

Expanded Training and Inspection

We also have launched an aggressive program to enhance our training efforts in the area of chemical handling and safety. We are increasing environmental assessments, audits and inspections of Kodak Park facilities. We are asking every employee to make a commitment that is more than symbolic. We want every Kodak employee to be conscious of his or her individual environmental responsibility.

Value Protection Program

A key element of environmental concern is how a particular situation affects people.

Beyond testing and cleaning up of our own facility, we have taken unprecedented steps to preserve neighborhood stability and to protect property values.

Reports of low levels of chemicals in the bedrock at our fence line along Rand Street caused a concern about property values. Kodak responded with its Value Protection Program.

This program is for current and future residents in specified Kodak Park neighborhoods, and to varying degrees includes:

* guarantees of property value

* low-interest mortgages

* below-market financing for new buyers

* grants and low-interest home improvement loans, and

* relocation expenses and closing costs for homeowners choosing to move.

Residents of streets south of Steko Avenue and of the Koda-Vista neighborhood are offered buyer incentives and low-interest home improvement loans.

Neighborhood Information Center

We also established a Neighborhood Information Center to facilitate the flow of accurate information to our neighbors.

Center staff counsels residents in obtaining benefits under the Value Protection Program and responds to neighborhood concerns. Technical experts also are available to answer questions about Kodak Park operations, the chemicals used there, and the ongoing health and environmental testing programs.

A communications network is being established to notify neighborhood leaders directly of chemical spills and accidents. A Kodak neighborhood newsletter keeps neighbors updated on environmental developments and other neighborhood interests.

Rochester has been Kodak's home for over a century. More than 45,000 Kodak people live here and take great pride in this community. Kodak shares the concerns of its neighbors and is committed to doing what is right by our neighbors at Kodak Park.

Senator Moynihan, we continue to believe and fervently hope there is no health risk as a result of chemical contamination of groundwater at or from the Kodak Park site. We are working cooperatively with local and state agencies and our neighbors. We are initiating major steps to improve our own environmental controls and to help bring greater stability to nearby neighborhoods.

Again, I appreciate this opportunity to appear before you this morning. If you have any questions, I would be more than happy to answer them.

To help me, I have asked Dr. Hays Bell, Vice President and Director of Kodak's Health and Environment Laboratories; Mr. Vernon Dyke, Vice President and General Manager of Sensitized Components Manufacturing; and Mr. Robert Grose, Director of Site Operations at Kodak Park, to join me here this morning.

Thank you.

March 31, 1989

The Honorable Daniel P. Moynihan
United States Senate
464 Senate Russell Office Building
Washington, DC 20510-3202

Dear Senator Moynihan:

Thank you for the opportunity to submit additional materials for the record of your subcommittee field hearing in Rochester on March 21.

As many of the witnesses stressed, Kodak is cooperating with the appropriate authorities and the community to address issues regarding chemical use and handling. We have already begun to purge chemicals from the groundwater under Kodak property. Testing programs continue to be developed and implemented, for example, to sample indoor air and to characterize the location of any chemicals in groundwater beyond our fence line. There have been no indications that there has been upward movement of any solvents from the bedrock and, at the trace levels found far below the surface, there is no threat to human health.

The enclosed documents contain information relevant to assessment of the health effects of methylene chloride. After reviewing all the data, our health and epidemiology experts concluded "the weight of the evidence suggests that dicholoromethane (methylene chloride) is not a human carcinogen." Based on our own and our Advisory Panel's review of these documents, we are confident that continued use of methylene chloride in photographic film base manufacture does not present a health risk to Kodak's employees or neighbors.

Even though we are confident that Kodak's emissions of methylene chloride at current levels are safe, we are continuing to take actions to reduce these emissions and other potential sources of exposure. These include the $100 million chemical storage tank improvement project, our film-base manufacturing expansion with advanced emissions control technology that will reduce emmissions by seventy percent and our enhanced environmental awareness program to strengthen chemical handling procedures, improve employee training, and reduce inventories by forty percent.

William L. Sutton, Senior Vice President and Director, Corporate Relations
EASTMAN KODAK COMPANY · ROCHESTER, NEW YORK 14650 · 716 724-4573

The Honorable Daniel P. Moynihan --2
March 31, 1989

Enclosed are the two documents that you asked us to submit for the record: Combined Sewer Overflow Abatement Program (CSOAP) Tunnel Testing Report and Dichloromethane Science Advisory Panel report. While your hearing was not focused on methylene chloride (dichloromethane), the different professional opinions of the USEPA staff, EPA Science Advisory Board, Kodak and the Dichloromethane Science Advisory Panel and New York State DEC and DOH were raised during the discussions. I believe this letter and the enclosed materials will demonstrate the evolution of the scientific research and understanding of the potential health effects of methylene chloride.

Please add this letter and the following documents to the hearing record:

1. Supplemental Statement; Eastman Kodak Company.

2. USEPA Science Advisory Board letter dated March 9, 1988.

3. Summary, Kodak Health Assessment of Dicloromethane, Oct. 1988.

4. Kodak Epidemiology Studies:

   a. Methylene Chloride Mortality Study, March 1987;

   b. Follow-up of Methylene Chloride Study, 1981;

   c. Epidemiologic Investigation of Employees Chronically Exposed to Methylene Chloride, Oct. 1978.

Again, thank you for the opportunity to submit additional materials for the record of the hearing. Reports prepared by many other authors are cited in the enclosed documents and copies can be provided if needed. We would be pleased to meet with you or your staff to discuss these documents or to answer any questions.

Sincerely yours,

Wm L Sutton

WLS:nls
Enclosures

cc: R. Kienitz

SUPPLEMENTAL STATEMENT

SENATE FIELD HEARING

MARCH 21, 1989

EASTMAN KODAK COMPANY

CSOAP Tunnel Testing Report (March 28, 1989):

The report indicates little evidence of chemicals present in the bedrock in the tunnel's path under Kodak Park. An analysis was done of test data collected from about 5200 samples of air and spoils during drilling of approximately 1450 linear feet of tunnel, 16 feet in diameter, at a depth of seventy to eighty feet near and under Kodak Park. The tunnel drilling has been completed under Kodak Park and the report, reviewed with Monroe County officials, concludes:

> "The air sample analyses showed that the air in the tunnel was always in compliance with worker protection standards. The spoils analysis showed that all of the spoils generated were uncontaminated and could safely be disposed of at the VanLare Treatment Facility. Samples of groundwater infiltrating into the tunnel indicated some groundwater contamination in areas in which contamination had already been confirmed. However, the extent and degree of contamination within the tunnel was much lower that might have been expected."

Dichloromethane Science Advisory Panel Report (Nov. 1988):

At the suggestion of Dr. David Axelrod, Commissioner of the New York Department of Health, Kodak convened a panel of sixteen academic scientists to provide an independent assessment of the health effects of methylene chloride. The chairman was Dr. Marvin Kuschner, Dean Emeritus and Professor of Pathology, State University of New York at Stony Brook. The participants were selected by Dr. R. Hays Bell of Kodak, with the assistance of Dr. Nancy Kim, New York State Department of Health. At the field hearing, the Panel's report was cited by Mr. Thomas Jorling, Commissioner of the New York Department of Environmental Conservation, along with Kodak's epidemiology studies, as being very important to his department in its decision to approve Kodak's permit application to significantly expand its film base manufacturing facility.

The Panel's four main conclusions concerning methylene chloride, stated on Page 8, are:

1. Methylene chloride does not produce the genetic changes in living cells of mammals often associated with cancer.

2. The evidence does not show that methylene chloride causes cancer in humans exposed for long periods at work.

3. Tumors found in mice and rats are of little relevance to humans because of their spontaneous nature.

4. Methylene chloride does not show other human health effects at low level exposures.

The Panel's report included support for "a virtually safe dose (VSD) for cancer risk in the range of 0.2 - 0.5 ppm."

EPA Science Advisory Board Letter (March 9, 1987):

We would like to clarify our response during the hearing with regard to EPA's classification of methylene chloride. As was stated at the field hearing, EPA proposed classification of methylene chloride as Class B2, a probable carcinogen, in its July, 1987 Draft Addendum to the Health Assessment Document. The B2 Guideline includes "agents for which there is inadequate evidence from human studies and sufficient evidence from animal studies." The EPA Science Advisory Board, after an independent review of health effects, stated:

> "For reasons discussed in the attached report, the Subcommitte concludes that the level of uncertainty is greater and the hazard posed by dichloromethane may be less than that expressed by the categories of EPA's cancer risk assessment guidelines."

EPA has not yet responded to its Science Advisory Board's comments regarding the "level of uncertainty . . . expressed by the categories."

Importantly, the more recent reviews by New York DEC and DOH, the Dichloromethane Science Advisory Panel, and the Kodak Health and Environment Laboratories have incorporated a weight of evidence assessment and have addressed scientific questions raised by EPA's Science Advisory Board. These reviews incorporate recently developed pharmacokinetic models that consider differences in the way methylene chloride is metabolized by different animals, including humans, in extrapolating from animal test results to humans.

Summary - Kodak Health Assessment Document (October 1988):

The Kodak assessment reviews all relevant scientific data on the health effects of methylene chloride. It incorporates the most recent evidence on health effects, including the pharmacokintic models discussed by EPA's Science Advisory Board. The assessment was done by the Kodak Health and Environment Laboratories in support of Kodak's application to New York State in October 1988 for a permit to expand its film base manufacturing facility in Rochester. As Commissioner Jorling testified at the field hearing, the state has granted Kodak a permit to construct.

The main conclusions of the study are:

> "The weight of the evidence suggests that dicholoromethane (methylene chloride) is not a human carcinogen. . . . A safe exposure level derived from animal data is 700 $\mu g/m^3$ (0.2 ppm)."
>
> "Human epidemiological studies of persons occupationally exposed to dichloromethane suggest no increased risk of mortality due to cancer or other causes."

Kodak Epidemiology Reports (1978-87):

The enclosed Kodak studies review the mortality records of Kodak employees involved with use of methylene chloride in photographic film base manufacturing beginning in 1964 and continuing to the ending date of each study. The studies were conducted by Kodak staff epidemiologists, were published in peer-reviewed journals in 1987, 1981, and 1978, and have been provided to several federal agencies, including OSHA and EPA.

One conclusion drawn from review of these reports is summarized in Kodak's Health Assessment of Dichloromethane:

> "Human epidemiological studies of persons occupationally exposed to dichloromethane suggest no increased risk of mortality due to cancer or other causes."

The latest epidemiology report, published in 1987, found specifically that, among the more than 1000 employees regularly exposed to methylene chloride, there were fewer deaths than expected from lung or liver cancer or heart disease, as well as from all causes.

The studies continue with expansion under way to include mortality records of employees involved with use of methylene chloride from its adoption as a solvent in the 1940s up to 1964 and to investigate the small difference between observed and expected deaths from pancreatic cancer.

TESTIMONY OF XEROX CORPORATION

BEFORE SENATE SUBCOMMITTEE

ROCHESTER, NEW YORK

MARCH 21, 1989

Introduction

Good Morning, Senator. I would like to introduce myself and my colleague to you and your staff. I am Richard S. Paul, Vice President and General Counsel of the Xerox Corporation. My colleague is James C. MacKenzie, Xerox Corporate Director of Environmental Health and Safety.

If it pleases the Senator, I would like to testify today on the issue of our confidentiality agreements with two former Webster neighbors who sued Xerox, and then Mr. MacKenzie will testify on our remediation project in Webster, which has been developed in full cooperation with the New York Department of Environmental Conservation and the U.S. Environmental Protection Agency.

The reason for so ordering our testimony is that I think the purpose and scope of our confidentiality agreements have been misinterpreted and I would like to lay to rest any concerns that you or the community may have with how our company has handled this matter. We settled with our former neighbors promptly and generously because we didn't want to litigate. We wanted to agree with the EPA on a remediation plan and get on with it. We have some 13,000 employees in the area and other neighbors to reassure and protect. Some have seen our actions as an admission of guilt, a reaction that we find surprising and distressing, but also instructive. We are not likely to repeat this pattern.

I would now like to discuss the facts relating to the settlement of the two lawsuits.

Settlement of Litigation

Recent press reports in Washington and Rochester have erroneously suggested that settlement of litigation between Xerox and two families had shrouded in secrecy the possible health effects of certain chemicals Xerox used in its manufacturing operations. These lawsuits were brought by the Statskey and DelMonte families who lived on Salt Road across from one of Xerox' facilities in Webster, New York. The lawsuits alleged personal and property damage had been caused by exposure to chemicals used by Xerox in its manufacturing operations.

Because Xerox is a company that prides itself on its health and safety record, its good citizenship, and its sense of responsibility to the Rochester community, I welcome this opportunity to set the record straight. I will confine my comments to the two lawsuits involving Xerox. I will not attempt to discuss whether or not there is a new trend toward secrecy in private settlements of environmental lawsuits. Fortunately, Xerox has not had enough such litigation to qualify me as an expert.

It is true that the parties and their lawyers agreed to keep the terms and conditions of the settlements of these two lawsuits confidential. This means that, for example, the parties cannot divulge the amount that Xerox paid the various plaintiffs in settlement. However, nothing prevents the members of the Statskey and DelMonte families from sharing their medical records with the public, if they choose to do so. Concerned public health officials, and indeed neighbors, are free to inquire of the families about their health problems and any causal relationship which they may believe exists.

The other facet of the so-called secret settlement to which the press reports referred was the sealing of the Court file. The documents filed with the court in the Statskey lawsuit are not sealed and are available for public inspection. Other documents generated in that suit that are in the Statskeys' possession--the medical reports that the experts prepared for them, for example--are not subject to restriction, and they can do with them as they like. The DelMonte lawsuit involved minor children, and the Court, under New York law, had to approve the settlements that were proposed for them. A Court record was created in connection with this approval process, and this record was later sealed by order of the Court. In deciding to seal the record, the Court apparently agreed with the parties that the competing considerations of protecting minors from public scrutiny versus providing public access weighed, in this case, in favor of protecting the minors. Despite this, if this Committee or a legitimate public health authority were to move the Court to unseal the children's medical reports for viewing by public health authorities, I can assure you that Xerox would support the motion.

Xerox believes that a restriction limited in scope to the terms of a settlement is entirely appropriate and serves the public interest by facilitating settlement of litigation. We also believe courts can and should shield children from public scrutiny in appropriate circumstances. Even if you do not share these views, however, the restrictions in these cases are hardly the "covenant of silence" that was portrayed in the press reports concerning these lawsuits.

If the DelMonte and Statskey families do make public their medical records, we think you would find that, like most lawsuits, the DelMonte and Statskey cases did not generate any significant medical or environmental information. Generally, lawsuits produce only conflicting partisan information. In fact, since these

particular lawsuits were settled very early in the discovery process (there were never any depositions, for example), they produced very little factual information of any kind.

Xerox strongly supports the national interest in finding ways for scientists and health officials to learn more about hazardous materials and their effects upon exposed populations. Xerox, at its own initiative and at considerable expense, has funded extensive research to assure the safety of our products and the health of our customers and employees. The results of this research have been shared with government agencies and even, where appropriate, with our competitors. The health assessment programs which are administered by the Federal Agency for Toxic Substances and Disease Registry, as well as the objectives of your own proposed legislation, S. 233, the "Hazardous Wastes and Human Health Survey Act", are intended to accomplish these public health goals. Xerox supports those efforts. As I hope I have made clear in my remarks here, the settlement agreements and the court order which were entered in the two lawsuits do not undermine or in any way compromise those objectives.

Mr. MacKenzie will now discuss our environmental status and remediation plans at our Webster site, with specific focus on the Salt Road incident.

-Xerox Policy Regarding the Environment-

Xerox Corporation is committed to the environmental health and safety of its employees, customers, neighbors, and the environment. This policy is applied worldwide on an aggressive basis. It means being completely open and cooperative with relevant regulatory authorities and compliance with all legal requirements. We have followed this policy to the letter in Webster and elsewhere.

-History of the Salt Road Incident-

Xerox built the 224 complex near Salt Road, the easterly boundary of the 1000 acre facility in Webster, New York during the late 60's. The plant was used to produce toner and developer, both materials used in xerography for producing copies. Later, in the early 70's, the site was used to clean developer with trichloroethylene (TCE), and then recoat the developer with a toluene lacquer as part of our reclamation processes. Both TCE and toluene are listed as hazardous substances under federal law.

In mid-1984, it was determined that both toluene and trichloroethylene had apparently leaked or overflowed from underground tanks into the soil of a courtyard of Building 224. The soil was removed and transferred to a New York State approved Class A landfill. As part of a Xerox worldwide program to remove underground tanks, the vessels were replaced above ground in concrete vaults to make sure any future leak would be contained. The problem was considered corrected.

During November of that year, while installing footing for building expansion in the Courtyard, red-colored groundwater was encountered indicating the earlier leaks had not been fully remediated.

RECRA Research Inc., a consulting firm which had been conducting an extensive hydrogeologic characterization of a closed landfill elsewhere on the property, was retained to install monitoring wells and determine the extent of ground water contamination. The previous work done by Recra Research from 1979 through November, 1984 had indicated that groundwater on the site flowed north by northwest. Data became available in March 1985 that showed the water was

contaminated with trichloroethylene, 1,2 dichloroethylene and toluene and extended to the north by northwest as expected, but additional wells were required to determine the boundaries of the plume of contamination. The National Response Center was notified on March 18, 1985 . As additional test wells were drilled, data indicated that the contaminated ground water was moving in a southerly and easterly direction as well. On August 8, 1985, to our surprise; a well on the Salt Road boundary indicated that contamination had likely left Xerox property in an easterly direction across Salt Road. (It was later determined that this unexpected flow was caused by underground bedrock which split the flow and sent it in two directions, rather than the usual flow north by northwest.) Neighboring residents on Salt Road were notified immediately. It was determined that only one home (DelMonte, #676) was using a well for potable water. That home was provided with bottled water immediately and connected, at Xerox expense, on August 10, 1985, to the Town of Webster water supply. Samples of well water previously used by the DelMonte family were determined to contain 2 parts per million of trichloroethylene, and 1 part per million 1,2 dichloroethlene, both of which were above drinking water standards These data were provided to the family.

The Town of Webster, County of Monroe Health Department and New York State Department of Environmental Conservation were notified on August 8, 1985 and on August 9, were apprised of all details at a meeting convened at Xerox. Xerox later signed a consent order and paid a $95,000 civil penalty to the EPA. The agency had alleged that Xerox had violated regulations having to do with permits, storage and reporting.

Although the company thought its actions were appropriate and timely, it chose to pay the fine and get on with the job of remediation.

-Xerox Purchase of Additional Property to Contain the Plume-

The transport of contaminants in the water under the properties east of Salt Road across from the Xerox plant was confirmed by monitoring wells installed on what is called the Schreiber property on the attached map. For purposes of definition and control of the contamination plume, Xerox purchased the Schreiber property (approximately 60 acres), and later three homes and a vacant lot on Salt Road, across from the Xerox site, also shown on the map.

Since 1986, Xerox has taken a number of steps to begin remediation and control the flow of the contaminated groundwater. These steps have included pumping and decontamination of groundwater and blasting of collection trenches in the bedrock. From mid-1988 to the present alone, over 10 million gallons of ground water have been pumped and decontaminated to drinking water standards before being discharged to the Village of Webster treatment works. In addition, since 1986 we have been working closely with the United States Environmental Protection Agency and the New York State Department of Environmental Conservation on an extensive hydrogeologic investigation.

On March 24, 1988, the company signed a Corrective Action Order with the EPA, which is a common step in matters of this kind. The order provides the EPA with monitoring and concurrence over the remediation of the Salt Road incident.

99-392 0 - 89 - 4

As of today Xerox has established the horizontal and vertical dimensions of the contamination and a Facility Investigation Report has been submitted to the EPA. Several technologies using oxidative processes to destroy the contaminants have been and are continuing to be evaluated during interim remediation. It is projected that a corrective measures plan will be submitted to the EPA before the end of 1989 for its review and public comment and participation.

-Other Neighbors-

When the Salt Road incident was first announced, Dr. Mark Merkin of the Monroe County Department of Health expressed concern for possible migration to wells in the Webster area of selenium and arsenic from a Xerox landfill on the company's 1000-acre Webster site .

Although Xerox knew, through extensive monitoring of the well network around the landfill , that its landfill had no connection with the Salt Road incident (the landfill is situated some 3000 feet west and 2000 feet north of Building 224), the company nevertheless joined with the Department of Health in the testing of some seventy wells located in an area bounded by one mile to the east, the lake on the north, (approx. 1.5 miles) and three miles to the west. The tests consisted of repeated sampling and analyses for arsenic and selenium. The wells all met drinking water standards that apply to arsenic and selenium. Any arsenic present reflected both the naturally occurring arsenic content of the rock formation in Monroe County, and historical agricultural spraying. Nevertheless, Xerox, as a gesture to its neighbors, installed a water main on several blocks of Phillips Rd., which runs along the western boundary of our property and connected all of our

neighbors, who were not already connected, to the Town of Webster's water supply.

-Public Reports-

On November 4, 1985 a public meeting was held at the Webster Town Hall which included representatives of the Town of Webster, Monroe County Health Department, and New York State Department of Environmental Conservation. RECRA Research, Inc. presented the current investigations and understanding of the 224 contamination problem.

Periodically the staff of Town of Webster has been apprised of the on-going program and status.

On April 21, 1988, a detailed status of the 224/Salt Road site was presented to the Town of Webster Board in a public and televised meeting. Also included were the details of all other environmental issues of concern at the Xerox Webster facility including the planned submission to EPA of emissions required under the Superfund Act . Copies of the presentation were provided to the Board members. A similar presentation open to the public was made on April 25,1988 to the Board of the Village of Webster.

At the public hearing held by New York State Department of Environmental Conservation on January 19, 1989 (also televised), about the remediation plan for the closed landfill on the Xerox Webster facility, several concerns were expressed about the landfill plan and the facility as a whole. These concerns led to a February 6, 1989, informational meeting held for neighbors with some 40 attending the three hour meeting. Additional meetings are planned. In all such meetings we

have and will continue to assure our employees and neighbors that they are in no danger from any emissions from Xerox.

Air Emissions and Pollution

The press and several neighbors have expressed concern about air emissions from the Xerox Webster Facility. These concerns have been heightened by the alleged secrecy surrounding the lawsuit issues. All air emissions from the Xerox Webster Facility are permitted by the New York State Department of Environmental Conservation. There have been no problems or fines associated with non-compliance. All ground level concentrations are below State limits. The findings set forth below are illustrative of our studies, and all of the findings were well below established limits.

- On May 28, 1986, Xerox had Galson Technical Services, East Syracuse, NY sample the air and surfaces of the home at 676 Salt Road (DelMonte). The reported findings are: selenium non-detect, arsenic non-detect; toner indicated on surfaces such as window sills, refrigerator, tables; total hydrocarbon 0.2 to 0.3 parts per million. Efforts to demonstrate airborne toner were non-productive.

- On January 12, 1987 Clayton Environmental Consultants surveyed the indoor air quality at 676 Salt Road (DelMonte) and 666 Salt Road (Statskey). No trichloroethylene (TCE) was detected at either location. Toluene in the DelMonte's former home ranged from 0.01 to 0.03 parts per million and in the Statskey's former home, 0.01 parts per million or less. In the Statskey house total hydrocarbon levels of 0.1 to 0.2 parts per million were found except in the area of the house where the Taylor Topper Company (hairpiece and hair products business) operated. In that area, where Mr.

Statskey stored chemicals used in his business, total hydrocarbon concentrations were four times higher at 0.84 parts per million. Sampling of air outside the Statskey residence indicated total hydrocarbon concentration to be less than 0.03 parts per million. No detectable levels of toluene or TCE were found outside the home.

- In November, 1988 Galson Technical Services, East Syracuse, NY conducted a determination of ambient toner concentrations in the vicinity of Xerox, Webster Facility. The toner concentration over several days ranged from 0.1 to 4 micrograms per meter cubed, which is well below the state limit. This is some 2500 to 100,000 less than the OSHA standard.

In summary, Xerox has been open and responsible in dealing with environmental issues at the Webster site. We have cooperated fully with federal, state and county regulators and we have briefed the public on five occasions. We believe that the situation is under control and that there is no threat to the health or safety of our employees and neighbors. Xerox policy, which is as I have previously outlined to you, is strict. Our standards are high. And we have lived up to both. We are proud of our conduct in this matter.

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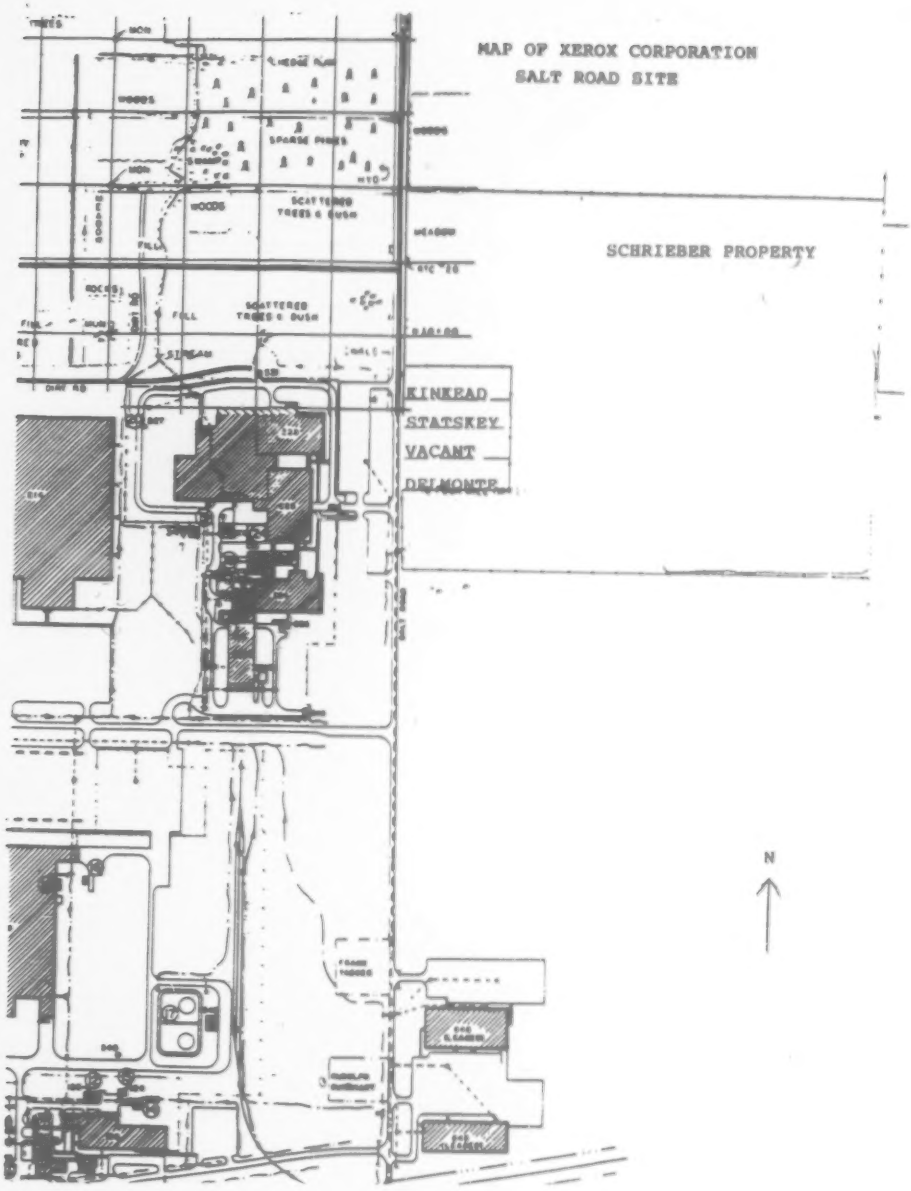
MAP OF XEROX CORPORATION
SALT ROAD SITE
SCHRIEBER PROPERTY
KINKEAD
STATSKEY
VACANT
DEL MONTE
N

Fifteenth Anniversary
15
Center for Environmental Information
1974 - 1989

Center for Environmental Information, Inc.
99 Court Street
Rochester, New York 14604-1824
Phone 716-546-3796
Fax 716-325-5131

April 4, 1989

Senator Daniel P. Moynihan
Committee on Environmental
and Public Works
U.S. Senate
Washington, D.C. 20510

Honorable Senator Moynihan:

Comments in this letter are for the written record, subsequent to the field hearing held at your request in Rochester, New York on March 21, 1989.

The Center for Environmental Information (CEI) submits:

(a) observations on significant characteristics of the Rochester situation since March 1988, and
(b) recommendations about workable solutions.

Significant elements:

1. Despite the presence in this community of a number of active environmental organizations, none of them has chosen to become involved in this issue. Furthermore, a poll was conducted among CEI members (an environmentally literate, aware and concerned group of citizens) in April, 1988, at the height of initial disclosures about potential contamination from Kodak Park. In regard to their perception of major local environmental issues, 90% of the respondents gave solid waste as the number one problem; only 5 out of 167 noted Kodak chemical contamination at all.

2. Media reporting has tended to shed more heat than light. It has resulted in confusion about the nature of the hazards and their associated risks, as well as the validity of the testing and what it all means, in plain English. The attached articles speak for themselves.

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Conservation, Rochester International Corp.
Richard Schleyer
Dr. Robert L. Sproull
President Emeritus & Professor of Physics
University of Rochester
Allen Taddiken
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Dr. Lawrence Lundgren
Richard Shultz
Dr. Edward N. Thorndike
Andrew Wells

3. <u>There has been a lack of coordination among governmental agencies in responding to the problem.</u> Three layers of government (federal, state and local), a multitude of agencies, and a veritable stew of different legislation, promulgation, regulations, standards and guidelines has resulted in confusion about roles, jurisdictions and public pronouncements about risk. Further erosion of public confidence has occurred where different experts from each agency openly disagree among themselves.

CEI recommends:

(a) A careful examination of the present regulatory system to determine a more expeditious and coordinated process of government response to an environmental problem. The allocation of agency resources should be based on the relative significance of the problem, not solely on the perceptions of the public or the media.

(b) The establishment of a Center for Risk Communication, which brokers information between scientific experts, decisionmakers, the concerned publics and the media in an understandable, timely and comprehensive manner. CEI, using the successful model of its Acid Rain Information Clearinghouse, is attempting to establish such a mechanism as a means of achieving effective and sustained public/private cooperation in determining relative risk.

Sincerely,

Elizabeth Thorndike

Elizabeth Thorndike
President

enclosures

Rochester Parents Against Pollution

Ken Jolie Harrington, Co-Chairperson; Frank Polizzi, Co-Chairman; Thomas Hopkins, Co-Chairman

March 21, 1989

Senator Daniel P. Moynihan
United States Senate
Washington, D.C.

Senator, I stand before you today as a representative of Rochester Parents Against Pollution, a community based organization that has formed to right the wrongs of exposure to chemical hazards in our community. I am here representing the victims of toxic exposure; the children who suffer from neurological seizures, the children who suffer with malignant brain tumors, and those with a host of other symptoms ranging from respitory ailments, severe bloody noses, nausea, skin rashes and allergies. As a parent myself, I also represent those parents and adults in our organization who are trying to search for answers to their miscarriages, skin rashes, brain tumors and cancer. Senator, I know you are here looking for facts. Facts that will lead to answers to the following questions I pose, but unfortunately, there are no easy answers and there aren't enough SCIENTIFIC studies to lead to even the easiest of answers regarding these issues.

SENATOR, we ask of you today, "How has the situation in Rochester gotten this bad?" What can we as parents do to PROTECT our CHILDREN, our HEALTH, our PROPERTY, our HOMES, and our ENVIRONMENT? There are several study areas that the Eastman Kodak Company has acknowledged needs testing. These areas have been designated Class Two Inactive Hazardous Waste Sites by the NYS Department of Environmental Conservation.

1.) WHY is Eastman Kodak being allowed to hire the consultants and handle the testing of the residential study areas? This is a MAJOR CONFLICT of INTEREST.

a.) Radian Corporation, hired to do the testing of homes on Rand Street and in the Koda Vista neighborhood, has obviously shown that they cannot handle the testing correctly; canisters have not been cleaned properly, they can only handle a small number of testing a week, etc..

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2.) Why isn't the State of New York supporting the local D.E.C.? They have only three full-time people handling this massive problem in Rochester, when a total of more than fifteen is necessary to properly and effectively get the job done?

3.) Why isn't New York State hiring the experts and seeing to it that ALL of the testing regarding this issue is done immediately??? There is evidence to show that the State has done this in the past with smaller companies (such F.M.C. in Middleport, NY) and then sued the company for the cost involved.

SENATOR, our families are being used as HUMAN GUINEA PIGS! We live directly near these study areas and Class two sites. Until the testing is done and completed and it is shown beyond a DOUBT THAT IT IS SAFE, we should have the choice to leave the areas being tested. There are State and Federal precedents regarding this very issue. Over 800 families in the Love Canal area were allowed to leave their homes to insure the safety of their health in 1980. During the week of March 13th, every morsel of fruit from the country of Chile was removed from store shelves and fruit markets in America because traces of cyanide were found in two small grapes. To date, those are the only two grapes out of tens of thousands of crates and containers, possessing only traces of cyanide that, according to authorities, wouldn't have been harmful to even a small child. The Federal Health Director, nonetheless, ordered all fruit removed from our nation's shelves. That is the concern of FDA Commissioner Dr. Frank Young. His advice to Americans is that it is better to be "safe rather than sorry."

How can we, as parents with very real concerns and fears, be told that we have to accept the bureaucratic system that governs the testing procedures and eventual answers to our very Real and IMMEDIATE CONCERNS. It has been ten years since the residents of Love Canal were allowed to escape the horrible nightmare with which they lived for years. And there are STILL no answers!! Are we to sit idly by, pretending that a problem doesn't exist??? HAVEN'T WE LEARNED ANYTHING FROM THAT EXPERIENCE?

SENATOR, unfortunately, we don't have the answers to the questions that many scientists have regarding the link to chemical exposure, cancer, tumors and attrocities to peoples' physical and mental well being. Even the scientists disagree as to what the safe levels of toxic chemical exposures are to human beings--ESPECIALLY small children who are particularly vulnerable in their early growth and development stage. Our local health officials have been irresponsible in their handling of the

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School #41 problem. Dr. Joel Nitzkin made a recommendation to reopen the school despite the inadequacy of the information on contaminant levels in the school. The testing that was done revealed levels of Methylene Chloride exceeding air level guidelines for New York State. This alone should have dictated the closing of School #41 to insure the safety of the children to further exposure. Vinyl chloride, a known human carcinogen, was found at levels of 61 parts per billion (ppb) in the soil. Vinylidene Chloride was also found at approximately 4,000 parts per billion in the railroad bed near the school, possibly the result of a 10,000 lb. Vinylidene Chloride spill in 1981 from Building 119 in Kodak Park. A by-product of Vinylidene Chloride as it breaks down is Vinyl Chloride. The very fact that such high levels of such a chemical was found near the school and then found in its more stable form in a well on the actual school property would LOGICALLY call for testing of Vinyl Chloride in the air sampling. Yet, this chemical is not being specifically tested for in any of the Health Department studies. According to Christopher Marlowe, a toxicologist we have consulted with extensively on this matter, the NIASH procedures for air testing of Methylene Chloride and Vinyl Chloride are almost identical. How much more expensive could it be to take the same extract and run it through an extra procedure? What is the cost benefit ratio compared to the health of the children who must attend the school??

The additional testing that is slated to take place on School #41 is limited, at best, in its scope and design. The Department of Health should be using a monitor or meter on a twenty four hour basis that responds to TOTAL ORGANIC VAPORS. It would seem that meters could be used to detect what percentages of these were specific chemicals. It could well be that the children in the school are not being exposed to high levels of chemicals in the ambient air at certain points in the day, but when Kodak steps up its production, the levels of contaminants in the air could rise significantly over the course of the day. Dr. Nitzkin has stated publicly that the amount of contaminants at the school are still very slight. He also notes that in a school building - where people come and go --exposure would not be prolonged. And he says that the exposure could change, depending on wind direction. He has stated that the initial air tests were done on a day when the air was blowing directly at the school from Kodak Park, an event that may only occur "one tenth of the time." Any one of the toxicologists we have consulted with cannot believe Dr. Nitzkin would not take into account the high levels of contaminants found in the ambient air OUTSIDE the school! If the children who attend the school live in the

Rochester Parents Against Pollution

neighborhood, then the indication is highly LIKELY that they are being exposed to high levels of CONTAMINANTS in the ambient air on a twenty four hour basis. A health risk assessment, at least a TRUE one, cannot possibly be done without taking into account what these children are exposed to on a twenty four hour basis. We checked with experts at the National Weather Service who informed us that the wind blows from a Northeast to Northwesterly arch (from Kodak Park toward the school property) thirty to forty percent of the time. Is Dr. Nitzkin suggesting that the parents only need worry about the health of their children when the wind is blowing toward the school?? Is this what we are to think of as a Scientific basis to make such a crucial recommendation?

It has been a year since the very first disclosure of chemical contamination was reported found in a residential area at Kodak Park. It has been a year, but yet, to date, there have not been any studies done regarding health issues. A perfunctory telephone survey by the Monroe County Board of Health was done to determine if there was an immediate health hazard in the neighborhood on Rand Street. Sixteen randomly selected families were contacted. Of those, 42% reported headaches, 28% reported eye irritation, and 34% reported noseblleds. From this sketchy report they concluded that there was no immediate health hazard posed to the residents in that study area. From the exact same study the Health Department determined that its limited nature made it impossible to attribute the ailments to the pollution caused by Kodak. As of this date, there has still not been any extensive studies implemented in that area, or at School #41, or in the Koda Vista neighborhood. The Koda Vista neighborhood in Greece is located directly adjacent to KPM two, a 200 acre site in Kodak Park that was recently designated by the New York State Department of Environmental Conservation as a Class Two Inactive Hazardous Waste Site. A Class two site is defined as "a site posing a significant threat to the public health or environment - action required.

Why hasn't the Health Department begun or initiated a study in this area (known as Study area two) to determine if the residents and children that reside there exhibit any of the symptoms resulting from chemical exposure?? There are known cases of excessive hyperactivity, neurological seizures and learning disabilities in the children who reside in Koda Vista. There are numerous health concerns in many of the other areas that have yet to be tested for contamination.

HOW CAN ANYONE JUSTIFY THE FACT THAT OUR FAMILIES ARE BEING FORCED TO STAY IN THESE NEIGHBORHOODS AGAINST OUR WILL UNTIL SCIENTIFIC STUDIES SHOW THAT IT IS SAFE TO LIVE THERE!!????

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Fortunately, for the parents of AMERICA, Dr. Frank Young with the FDA thought enough of the health and welfare of OUR children to take that extra step and eliminate the slightest possibility of even ONE CHILD'S health being adversely affected.

But who is looking out for the best interest of the children who reside in the surrounding neighborhoods of Kodak Park and XEROX?? Who can we turn to to guarantee the health and safety of our children? Can we turn to Eastman Kodak themselves? Or to the State D.E.C., or to the State Health Department? Or must we turn to the leaders of New York State? Or ultimately, the Federal Government??

WHERE DOES THE BUCK STOP????!!!!!!!

Is it not a CONFLICT of INTEREST to allow the industries accused of causing the pollution to supply and finance the very testing which is designed to give us the OBJECTIVE, UNBIASED answers to the PROBLEM??????

Wouldn't it be more LOGICAL and COST EFFECTIVE to do testing of all affected areas at one time as opposed to piece mealing the project, thus dragging it out for a period of years???

Isn't it LOGICAL to suggest that the State Health Department immediately conduct tests to determine what symptoms residents exhibit,so that a cause and effect relationship could possibly be determined between the chemicals found and tested for?????

Our following recommendations based on the factual information we have compiled are:

1.) A task force be assembled by the NYS Governor's office to implement testing and health studies in the affected areas.

2.) That all families residing in study area zones be given the option of leaving the area without any loss of property value or personal expense.

   a.) If this is something that Eastman Kodak or XEROX is NOT willing to do on a VOLUNTARY BASIS, then the State and Federal government should do so to protect the citizen's health and well-being.

Kodak voluntary program Rand/Stecco rec'd compensation

3.) WE WANT, and find it only logical, reasonable and HUMANE, above all else, THAT OUR FAMILIES BE PERMANENTLY RELOCATED.

Once again, may we remind you that a State and National

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precedent regarding this same issue was established with the buying of homes in LOVE CANAL and again most recently at TIMES BEACH.

These decisions were made with no more empirical data than we have available at the present time in our situation. These same decisions were also made to PROTECT the health and future safety of the citizens in those affected neighborhoods.

Are the issues that were faced with those situations any MORE SIGNIFICANT than what we deal with in our community?

WE HAVE A RIGHT TO HAVE OUR HEALTH AND FAMILIES PROTECTED!!

To this date, the only thing we have received from Kodak, Xerox and our local, state health and environmental officials, has been denial, delays upon delays, mistakes in testing, no progress in remediation and EXCUSES, EXCUSES and more EXCUSES.

SENATOR, we are now looking to you and the Federal government to insure that the safety and health of our families is of TOP PRIORITY on your agenda. We have been patient to a fault, have received no conclusive data to relieve our concerns and fears, and are tired of being made HUMAN GUINEA PIGS while bureaucrats, politicians, corporate executives, public relation firms and scientists struggle with the issues and health concerns at hand.

Senator Moynihan, the members of Rochester Parents Against Pollution commend unto you the future health, safety and well being of our CHILDREN. Their future is at stake. We are looking to you for the answer to our most immediate problem, EXPOSURE to the UNKNOWN.

RESPECTFULLY,

cc: see next page

Jolie Harrington
Co-Chairperson

Rochester Parents Against POLLUTION

Thomas Hopkins
Co-Chairman

Frank Polizzi
Co-Chairman

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A PLEA TO THE HONORABLE DANIEL PATRICK MOYNIHAN U.S. SENATOR, NEW YORK

by
Richard C. Streeter III
March 21, 1989

**"And David said, What have I now done ?
Is there not a cause ?**
I Samuel 17:29

The history of civilization bears witness to the humbled, broken and defeated bodies of giants, from the hands of little Davids.

For David - it was Goliath and the Philistines

For Moses - Rhameses and Egypt

For Ghandi - The King and the English Empire

For Martin Luther King - U. S. complacency, prejudice and oppression.

Today, in Rochester we face another giant, yet - another Goliath. And, since we fail to learn from history, we are, as it is written, condemned to relive it.

It is a yellow Goliath, one who's hold on a citizenry, community, state government and national perception or "image," (as they would prefer), is one of outstanding distinction, reputation, trustworthiness and commendation.

But, like all giants, it can no longer exist on it's past history, reputation and slick, Madison avenue public relations.

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In today's white light of truth, a giant company can no longer trample on the lives of innocent people, show disregard for the future of children, families, neighborhoods, streams, lakes and even the very air we breath.

Today, as in the time of David, Moses, Ghandi and a host of God's servants who have followed, an individual steps forth to proclaim

"Is there not a cause ?"

Senator Moynihan, I and the citizens here assembled, are seeking your attention, indulgence and your most serious consideration, for a cause of vital importance to the life of our community.

Recently, at a meeting held at the John Marshall High School, here in Rochester, more than 800 citizens of this community; mothers, fathers, children, the Rochester Board of Education, representatives from state agencies and members of the local teachers union, listened to Dr. Joel Nitzkin, Director of the Monroe County Health Department, as he assured the community that the dangers of chemical contamination in and around a local grammar School; School 41 and to our community, from chemical spills and emissions from the Eastman Kodak Company, amount to very little risk. He said this, while willfully withholding vital information and evidence to the contrary.

At a meeting held this last Wednesday, March 15th, at the Aquinas Institute, his assistant Dr. Karen Bell announced to the audience that, **the entire Monroe County area is contaminated**. In fact, she was quoted in the local Democrat & Chronicle as saying, she *"could not recommend a safer place to live,"* (Rand Street) *"based on ground water contamination.* (and)*Virtually everyone else in this county is living over contaminated ground water."*

Because of these recent statements Senator, from our County Health officials, I am requesting that, the responsibility for the health, safety

and welfare of an entire U. S. community; Monroe County, is in jeopardy . Therefore, the Federal Government, at your direction, should move without delay, in conducting a thorough investigation, as to the validity of these statements, respond accordingly and take whatever action is necessary, to assure the health, safety, lives and welfare, of the people of Monroe County.

We are no longer talking Senator, of a few streets and neighborhoods in our community. We are talking about **an entire community**, who's economy depends on the future of the Eastman Kodak Company, Xerox Corporation, Bausch & Lomb - and well, the list could go on and on. For these corporations, let alone the citizenry of this community, to be living and working on and within vast areas of contamination, is unthinkable.

What you are witnessing today Senator, is just the tip of the iceberg from a group of citizens, who will no longer tolerate the poisoning of their homes, yards, schools and the very air we breath, from corporate polluters.

A group of citizens who will no longer sit idly by while, the #1 polluter of our community and county; the Eastman Kodak Company, is allowed to continue a fifty year, documented history of chemical spills, explosions, deaths, and illegal air emissions, while demonstrating an attitude of arrogance and indifference, towards environmental agencies, enforcement officers and their next door neighbors.

We're tired of the gross evidence, in regards to "conflict of interest" when; Dr. Nitzkin can sit on an Advisory Board at Eastman Kodak and Mr. James Mitchell, a Kodak Executive, is allowed to sit on the Board of the Monroe County Health Department.

We're suspect, when the Department of Environmental Conservation (DEC), allows Kodak, to engage the Radian Corporation to conduct ground and air testing and then, after Kodak reviews and compiles the data, passes the findings on to the DEC. Particularly, when the record

proves that, the Radian Corporation has already been found guilty of data tampering, when hired by another corporation in a similar environmental matter. (May, 1988, Radian Corp. Document Control No. 88-264-037-01.)

We're baffled as to why the State and County Health Departments, DEC and Environmental Protection Agencies, depend on and allow the "suspect," (Kodak), to investigate, test and then (of all things), be expected to compile and produce incriminating evidence, against themselves. It's a little like asking a killer, to go out and investigate, gather and produce evidence, that will then convict him of murder.

We wonder how objective our government officials can be; specifically Congresswoman Louise Slaughter, when her husband is an executive at Eastman Kodak. We have yet, to hear her voice on this matter.

We're tired of Kodak's continuous lack and abuse of the law, in regards to the reporting of spills and emissions, tens-of-thousands of untreated chemicals, waste water and sewage, flowing into our historic Genesee River, at a time when the Rochester Convention and Tourism Bureau, the Mayor and city leaders, are trying to promote, develope and improve the entire river area.

We're frustrated when, in spite of reports and evidence of excessive ground contamination, in and around building 53, NY State DEC Commissioner Thomas C. Jorling, recently awarded them a certificate, allowing them to, not only continue their pollution but, build another plant on the very site that Kodak records prove, is the site of their major chemical spills, contamination and the site where a construction worker, working on tests for that planned construction, recently collapsed and was taken to the hospital, for respiratory illness.

We're incensed at reading advertisements, placed by Kodak, capitalizing on Mr. Jorling's ridiculous decision and consequent award, implying that they; Kodak, are a good and responsible corporate

citizen, in our community, while unreported spills and emissions continue.

Attached to this communication Senator, is a partial history of Kodak's fifty-year history of accidents, spills and emissions. This document should certainly qualify them, for receiving a "Bad Actor Status."

Be advised, Senator Moynihan, the people are rising up, like David of old, against the oppressor.

We will be seeking therefore, consideration under the Civil Law Practice Rule, Article 78 Procedure; a challenge to Mr. Jorling's award and we will eventually succeed, in halting any further construction on the building 53 expansion, until such time as Eastman Kodak Company, demonstrates a more positive attitude, noticeable, verifiable and documented policies, action and results, in their handling of hazardous chemicals, wastes and emissions.

In addition, we will be supporting Monroe County Legislator William P. Polito, R-Webster, in his proposal to require **public disclosure of all toxic spills,** to be filed in a local place, such as the county clerk's office, so the public and media can learn about them quicker.

Already, these issues have reached the front page of the New York Times and have been reported on the ABC Television news network. I can assure you Senator, the other networks; including *"60 Minutes," "20/20"* and yes, even Mr. Geraldo Rivera, will be visiting our town - in the very near future.

Do you remember, Senator Moynihan, Lois Gibbs of "Love Canal" fame? She was on the telephone, for over an hour with us yesterday, giving us advice and guidance, on how to deal with this problem and our elected officials. Material has already been reviewed by she and Steve Lester; scientist and toxicologist and a copy of a letter from Mr. Lester, will be in your possession by the end of this meeting. It does

not, as you might expect, support Dr. Nitzkin nor Dr. Bell's claims, of a safe and healthy School 41, here in Rochester.

I urge you Senator, to take seriously the words thus written for your consideration. They're not, just concerns expressed for me and my family nor for the people living in fear and anxiety around Rand Street, Maplewood, School 41 and Koda-Vista but, for **the whole community of Monroe** and for the 1500+ polluted lakes and streams of our neighbors in Canada.

It is time Senator, for the great yellow Goliath to "clean up their act," as well as their "**IMAGE**."

And - they won't you know,

not based on past history . . . .

until a David steps forth.

No, history does not change - for as I Samuel 17:29 states:

". . . . Is there not a cause ?

NEWSPAPER REPORTS
KODAK CHEMICAL SPILLS, EMMISSIONS & ACCIDENTS
THROUGH THE YEARS

DATE	NEWSPAPER	WRITER(S)	PICTURE
9/12/31	*Rochester Journal*	*none*	*pg.8*

STATE STARTS INQUIRY OF EXPLOSION

The State of New York today stepped into the official investigation of the explosion that partially wrecked building 20 at Kodak Park, resulted in five deaths, one a suicide, and caused injuries to thirteen other workemen.

Meanwhile, three other investigations in the blast were continued by Coroner Richard A. Leonardo, Rochester police and Eastman Kodak Company officials.

KILLED:

Frank Schmanke, 56, 134 Wilkins St.

Henry Pillen, 44, Seneca Park Avenue, Summerville

Harold Sproule, 38, 68 Morvilled Drive

Albert Manzek, 58, 204 Weaver St.

Unknown (suicide from inhaling monoxide gas from his automobile)

SERIOUSLY INJURED

John H. Indiekofer, 40, 251 Lark St.

Thomas Dunn, 53, 11 Van St.

Daniel Shea, 46, 99 Sheridan Dr., Charlotte

Richard Appleton, 38, 28 Chalford Road.

10/1/31 *Rochester Journal* *none* *Picture: N*

KODAK BLAST LAID TO CREW BY CORONER

(2) That due to a broken valve stem in the exploded machine, the brine could not be and by actual meter registration was not sufficiently cold and of a temperature of at least 14 degrees below zero at the time when the machine was set into operation; and (3) That the Orsat Reader or meter on the said machine registered 94 degrees above zero at the instant of the explosion.

BELIEVES REGULATIONS NEGLECTED

"With these refutable scientific data strengthened by the absence of any direct or inferential proof to the contrary, we are compelled to accept the next logical conclusion: that the crew in charge of this machine neglected to heed the regulations concerning the operation of the same by starting it before the brine was at least 14 degrees below zero,

and by failing to shut the machine down at 72 degrees above zero and allowing it to reach a temperature of 94 degrees when it exploded.

No direct or indirect testimony could be obtained to prove in the slightest that either waste or demerit under the Bedeaux system did possibly make these workmen careless or encourage them to disregard repeated safety warnings to shut down the machine. (Refer to: Stephen K. Pollard, Assistant District Attorney, who represented the people of Monroe County at a public inquest, where all witnesses were examined under oath by Mr. Pollard at the Morgue on September 28, 1931, at 4 p.m. The record of their testimony was transcribed by the official Morgue stenographer, Charles Mercer, and is with the inquest testimony, filed with the county clerk's office, where all Morgue records are kept.)

Note: last explosion at Kodak park which took lives was in Jan. 7, 1901. Explosion took place in the acid storage building at Kodak Park. Two Rochester firemen were killed and three injured by inhaling nitric acid fumes.

7/29/52 ***Democrat & Chronicle*** ***none*** ***Picture: Y***

60 FAMILIES DRIVEN OUT OF HOMES FOR 4 HOURS AS FUMES CAUSE BLAST, FIRE IN WEST KODAK PARK SECTION

About 60 families from Needham St., De Wain St., and Ridge Rd. W., were forced out of their homes for more than four hours last night as chemical fumes caused an explosion and fire at 8:30 in the cellar of a Needham St. house. No one was injured.

The chemical was identified early this morning as a liquid known as xylene, according to Phillip C. Wolz, director of plant security for Eastman Kodak Company. He said the chemical got into the sewer system through a leaky valve on a tank of solvent from building 301 off Mt. Read Blvd., in the west part of Kodak Park. The chemical is a coal and wood tar derivative used as a solvent. The building is used for chemical synthesis. The area is near the West Kodak Park plant off Ridge Rd. W., near where an ether blast on July 1 sent two manhole covers hurling 25 feet into the air. The cause of the Perrinton St. sewer explosion was said to be isopropyl ether in the wash water from nearby Distillation Products Industries Division, which had become bottled up in the dry sewer, exploded in a flash of blue flame.

IN PICTURE: Charlene Parnell, 9; Carol Weirick, 7; Roberta and Patricia Payne, 6, twins, in whose home fumes exploded. In rear is Bonnie Weirick, 9, with black cat

lucky. The children took refuge in Wiercik garage at 33 Needham St. until authorities traced source of fumes.

7/29/52 ***Times Union*** ***none*** ***N***

BLAST PROBE PRESSED BY OFFICIALS

City and EKC officials today continued an investigation into the source and spread of chemical fumes which caused an explosion in the cellar of a Needham St. Home last night and drove 60 families in the area into the street.

Damage in the explosion was minor and no one was injured. Philip C. Wolz, director of plant security for Eastman, was on the scene with Safety Commissioner Kenneth C. Townson, Fire Chief John A. Slattery, Deputy Chief Edward Wirley and Howard Redmond, combustion inspectors from the Bureau of Buildings, made pressure tests in the sewers.

Residents of Needham St., De Wain St., and Ridge Rd. W., had complained of fumes in the area for the past month At 8:30 P.M. gas ignited with a roar in the cellar of a home at 40 Needham St., owned by Philip Payne. Payne was not at home but his wife and three children fled from the house. Ray Scholl of 39 Needham St., and two other neighbors went into the cellar with portable fire extinguishers and put out a blaze in some clothing and papers. Fire apparatus was called by another neighbor, C. Y. Beecher.

"It looks to us quite doubtful that a small leak in a chemical tank caused the blast," according to a Kodak spokesman. The leak earlier was said to have been in a tank of solvent in Building 301 off Mr. Read Blvd.

To clear the sewer system, water was pumped at high pressure for a half hour. Wolz said 10 one-inch water mains were opened at the Kodak Park plant to keep up the flushing through the night. . . . all residents returned to their homes at 2 a.m.

The combustion inspectors said their meters tested 100 (as high as the meters read) when they checked sewer pressures shortly after 9 p.m. By 11 p.m. the pressure had dropped to 40 pounds.

A similar explosion occurred in the session July 1, when isopropyl ether in the wash water at nearby Distillation Products Industries Division of Kodak got into the sewers.

7/21/64 ***Times Union*** ***Brian Sullivan*** ***N***

KODAK LAB ROOF LIFTED BY 'REACTION'

A chemical explosion yesterday blew a hole in the rood of a Kodak Park laboratory at Eastman Kodak Co., and sent a small amount of the chemical on houses some 300 yards away.

Two workmen fled in time when they saw the chemical getting out of hand. There were no injuries and no fire, Kodak said.

The company said some of the chemical was deposited on a section of Rand Street in "amounts so small that no adverse effects have been noted and no such effects are anticipated."

Nineteen firemen employed by Kodak flushed houses, yards and automobiles along the western portion of Rand Street, in the 200 block area, and similar precautions were taken inside Kodak Park Works.

Kodak spokesmen said the company is not calling the event an "explosion," but a "chemical reaction." One spokesman said the chemical reaction generated large quantities of heat and that the release of pressure from a vessel blew out four one-by-four-foot roof panels as well as some pressure-relief valves.

The small building - one story and 35 feet square - was "specially designed for just such an event."

The chemical involved was an aniline compound. Aniline is an oily, liquid, poisonous amine. An amine is any of a class of basic compounds derived from ammonia.

It is usually made by the reduction of nitro benzene or by the high-pressure reaction of chlorobenzene and ammonia and is used chiefly in organic synthesis of such things as dyes, pharmaceuticals, rubber chemicals and explosives. It also is used as a solvent.

Kodak said "a small amount of the reaction mixture in the form of tiny brown droplets drifted southward from building 125 and was deposited on the western portion of Rand Street." Neighbors said some 10 to 15 houses were involved.

"I heard a boom," said Mrs. James G. McMullen of 234 Rand Street. She said she was standing in her back yard at the time - about 9 a.m. - but did not think much about it at first.

Then, she said, another Rand Street resident noticed a "spray on our cars." Mrs. McMullen noticed droplets on her wash and on her blouse. She was advised to take a shower and wash her hair.

Another neighbor said Kodak personnel took laundry that had been spotted to the nearby Crescent Puritan Laundry at 1630 Dewey Avenue.

The Kodak medical department took part in the check of the area and a physician was among those who went from house to house along Rand Street.

... The building, called the "acid plant," is part of Kodak's synthetic organic chemical production.

One neighbor said fire trucks with extension ladders were used to hose down the roofs of buildings in Kodak Park near the lab.

10/9/73 ***Times Union*** ***Mike Zavadil*** ***N***

KODAK SOLVENT PROBED
NERVE DISEASE HITS OHIO PLANT

A chemical solvent made by Eastman Kodak Co., is being investigated in connection with incidents of a paralyzing disease among workers at a Borden Inc., vinyl products plant in Ohio.

The solvent, MBK (short for methyl butyl ketone), is used in making printing inks.

At least one worker at Borden's Columbus Coated Fabrics plant in Columbus, Ohio, has been crippled by the disease, called peripheral neuropathy. A recent report on the case says as many as 100 of the plants 950 production workers may be suffering some effects of the disease, which weakens arms and legs and disrupts physical coordination.

Union officials have told workers to stay off their jobs until the cause of the nerve disease has been determined.

10/02/76 ***Democrat & Chronicle*** ***none*** ***N***

There were no injuries reported last night after a toxic powdery substance from a plant at Kodak Park settled on homes in the Rand Street area, west of Dewey Avenue, police said. Police reported that an orange powder containing sulfuric acid settled in the area about 5 P.M. Kodak and city firefighters came to the scene and watered down houses in the area to prevent possible poisoning, police said.

3/18/73 ***D&C*** ***none*** ***N***

GAS CLOSES BUILDING

Three buildings at Kodak Park were closed down early yesterday morning when ammonia gas leaked into a cool water system at the main plant, 365 Ridge Road.

Jim Albright, a spokesman for Eastman Kodak Co., said employes detected a "heavy ammonia smell" about 7 a.m. yesterday morning. Buildings 12, 29 and 58 were shut down for safety purposes, Albright said.

Albright said the ammonia leakage was caused by a frozen valve on the factory chilled water cooler. The frozen equipment caused a buildup of ammonia pressure, that spilled the gas into the water system, he said.

The chilled water system is used for emulsion manufacturing.

1/31/79 ***Times Union*** ***Patrice Mitchell*** ***N***

MORE AILMENTS AT BLDG. 59
13 Kodak Workers report respiratory problems

Thirteen more Eastman Kodak Co., employees at Research Laboratories Building 59 have said they are experiencing respiratory difficulties, Henry Kaska, Kodak's public information manager, confirmed today.

Since late last fall, four building employees have complained of sometimes severe respiratory problems and allergy symptoms. Three have been sent to Strong Memorial Hospital's Infectious Disease Unit for testing, and one chose to be tested at the Mayo clinic, Rochester, Minn.

12/4/80 ***Times Union*** ***Kevin Moran*** ***N***

4 MEN STILL IN HOSPITALS; 1 IN GUARDED CONDITION

Gregory Waller, one of the Eastman Kodak Co., employees injured in the blast at Kodak Park, remained in "guarded" condition today in Strong Memorial Hospital's burn unit.

Waller, 23, of 234 Milford St., Greece, has a combination of fire and chemical burns—many serious third-degree burns - over 60 percent of his body, a hospital spokesman said. Guarded condition is considered life-threatening, the spokesman said.

Waller, a technician in Kodak's synthetic Chemicals Division, was one of two persons in the wing of Building 304 when the explosion occurred about 4:30 p.m. Tuesday.

2/20/81 ***Times Union*** ***none*** ***N***

DEADLY GAS STORED AT BLAST SITE

Two canisters of deadly phosgene gas were stored in the same Kodak Park building where an explosion occurred on December 10, say Eastman Kodak Co., officials.

The explosion blew out the pressure-sensitive walls in one part of the building, and injured 10 workers.

Phosgene is a poison gas used against soldiers in World War I. Kodak uses the gas as a catalyst, and the gas loses its toxitity in the reacting process.

The phosgene is stored in bay 10 of Building 304, which is separated by a concrete block wall from bay 9, the site of the explosion, said a spokesman for Kodak.

The phosgene canisters "are not that large"; each holds about 150 pounds of gas, he said.

Kaska said phosgene is used elsewhere in Kodak operations but he doesn't know how extensively. "It is handled in the safest possible manner," he said. "I'm not aware of any incidents" of phosgene being released to the air at Kodak, he said.

Among those injured in the December 10 blast was Gregory Waller, the Kodak technician who was inside the building when the reactor vessel exploded. Waller, 23, lost the vision in his right eye and was burned over 80 percent of his body.

3/03/83 Times Union Richard Orioli (Science Reporter) N

KODAK PARK RUPTURE CAUSES A FOUL SMELL
Non-toxic sulfur gas released, brings complaints

A disk in a chemical reactor at Kodak Park ruptured last night, unleashing a foul-smelling compound that drifted as far as the northeastern part of the city.

The gas was an organic compound that contained sulfur, said Tim Elliot, spokesman for Eastman Kodak Co., He would not name the compound but said that it is "not toxic."

The rupture occurred at 7:30 p.m. in Kodak's Synthetic Chemicals Division, on the west side of Mt. Read Blvd., between Ridge Road and Ridgeway Avenue, Elliot said.

"We notified the Fire Department, police, DEC and county Health Department," Elliot said. "We made everyone aware of what happened."

A public safety dispatcher for the city's office of emergency communications, said that a Kodak official notified his department at 8:05 p.m. that "a ruptured disk had let go."

The dispatcher said his department notified the state departments of Environmental Conservation and Transportation and the county Health Department.

(Times Union, same day)

Ms. Vivian Moultrie, 14 Stout St., called Monroe Ambulance when her 11-year old daughter, Knenge, began coughing and complaining of burning, watery eyes. She was examined at Rochester General Hospital. Ms Moultrie said the doctor said her daughter suffered irritation of the mucous membranes of the nose and throat but prescribed no medication.

Elliot said that 20 to 40 kilos, or 44 to 88 pounds , of the gas were released into the air.

(D&C same day)

A "few pounds" of an organic chemical containing sulfur was leaked into Rocheseter's atmosphere for about 45 minutes when chemicals being mixed in Building 304 in Kodak Park overreacted and tripped a safety device about 7:30 p.m., said Kodak spokesman Timothy Elliott.

5/5/84 *D&C* *Dan Bowerman* *Y*

KODAK PARK GIVES HOUSES THE BLUES
Apparent chemical emission stains siding in neighborhood; firm promises to remove color

A mysterious blue rain - apparently caused by emissions from EKC Kodak Park - tinted some pale houses on Rand Street a splotchy sky blue yesterday between noon and 1:30 p.m.

Bob Bristol, who lives at 254 Rand Street, said he left his house about noon to go shopping and returned an 1 1/2 hours later.

"I started with a white house," he said. "When I came back it was blue."

12/12/85 *D&C* *none* *N*

SPOILED CHEMICALS COSTLY TO KODAK

Film emulsion chemicals worth possibly millions of dollars were contaminated with peroxide at Building 30 in Kodak Park, the company discovered yesterday.

9/25/86 *D&C* *Steve Orr* *N*

200 LEAVE KODAK BUILDING AFTER MYSTERY ODOR REPORTED

About 200 people were evacuated from an Eastman Kodak Co., research building yesterday morning after workers there thought they detected the tell-tale odors of highly toxic gas used in the building.

Kodak officials later could find no evidence of a gas leak in the building, located on Lake Avenue across from Kodak Park and known as Building 81.

The company had not determined the nature or source of the odor yesterday afternoon, though one theory was that they had smelled newly mown grass nearby, Kodak and state officials said.

.....The gases that were suspected at first were arsine, a gaseous form of arsenic, and phosphine, a form of phosphorous, according to officials of the state Department of Environmental Conservation and the Monroe County Health Department.

Both gases, which are highly toxic and deadly to humans in large enough concentrations, are used in Building 81, said Bruce Finster, head of DEC's regional spill response unit.

DEC officials indicated they were ***mildly concerned because they had not been notified of the incident by Kodak.***

The DEC learned of the incident from a reporter after the building had already been re occupied, (1 1/2 hours after the incident), and officials subsequently had some difficulty obtaining information from Kodak, Finster said.
He said the DEC will raise the matter in a meeting with company officials.

10/14/86 *Times Union* *none* *N*
CHEMICAL SPILLS
Kodak Park firefighters were busy yesterday with two chemical spills.
A punctured tanker truck released about 600 gallons of corrosive acid about 11:15 a.m., and workers at nearby Kodak buildings were ordered to remain inside for several hours as a cloud of gas drifted above the area, officials said.
The only injury reported was suffered by a Kodak Park firefighter, Craig Opperman, who had a minor acid burn on his forearm, said Christopher Veronda, a company spokesman.
A second vapor cloud temporarily formed, but dissolved. About four hours later, a spill of an "organic solvent" occurred at the company's Lake Avenue research facility, Veronda said. As a precaution, three people were taken to Kodak medical facilities for observation.

(D&C same day)
Firefighters flushed the acid into Kodak's self-contained industrial sewer, Hersh said. He said the sewer leads to Hanford Landing, the location of Kodak's wastewater treatment plant.

NOTE: ADDITIONAL ARTICLES ARE BEING UPDATED AND COMPILED TO COVER THE PERIOD OCTOBER, 1986- PRESENT

99-392 (120)